

## 5. ECONOMIC AND SOCIAL OVERHEADS

### 5.1 Overview

The policy of active participation of the private sector jointly with the government sector in infrastructure development of the country was vigorously pursued in 2000. Even though government investment in the infrastructure sector fell short of expectations, mainly due to the curtailing of capital expenditure to accommodate increased defence expenditure, overall investment in infrastructure recorded a marginal improvement. Another significant feature witnessed in the infrastructure sector during 2000 was the commencement of several large infrastructure development projects and the continuation of the restructuring of public sector institutions. As in previous years, public sector investment was dominant in the areas of roads, ports, housing, water supply and power generation. The construction work on the long awaited Colombo-Katunayake expressway commenced in 2000. Engineering designing and acquisition of land were in progress in respect of the proposed Southern highway. Feasibility studies for the development of the Galle Port and the proposed Southern Port of Colombo too commenced during the year. Meanwhile, the private sector invested particularly in the areas of power generation, port development, passenger transportation, telecommunications, education, housing and health, which a few decades ago were confined to the state sector in Sri Lanka.

**TABLE 5.1**  
**Government Investment in Infrastructure**

| Year | Economic Services |          | Social Services |          | Total  |          |
|------|-------------------|----------|-----------------|----------|--------|----------|
|      | Rs.Mn.            | % of GDP | Rs.Mn.          | % of GDP | Rs.Mn. | % of GDP |
| 1991 | 26,022            | 7.0      | 2,964           | 0.8      | 28,986 | 7.8      |
| 1992 | 20,444            | 4.8      | 6,137           | 1.4      | 26,581 | 6.2      |
| 1993 | 29,600            | 5.9      | 6,075           | 1.2      | 35,675 | 7.1      |
| 1994 | 29,304            | 5.1      | 7,677           | 1.3      | 36,981 | 6.4      |
| 1995 | 36,106            | 5.4      | 9,854           | 1.5      | 45,960 | 6.9      |
| 1996 | 31,409            | 4.1      | 10,322          | 1.3      | 41,731 | 5.4      |
| 1997 | 32,481            | 3.6      | 11,552          | 1.3      | 44,033 | 4.9      |
| 1998 | 44,677            | 4.4      | 15,528          | 1.5      | 60,205 | 5.9      |
| 1999 | 44,234            | 4.1      | 17,493          | 1.6      | 62,727 | 5.7      |
| 2000 | 54,648            | 4.4      | 16,470          | 1.3      | 71,118 | 5.7      |

Source: Central Bank of Sri Lanka

### 5.2 Health

The broad objective of the national health policy is to build a healthy nation and thereby raise the quality of the life of the people. Sri Lanka possesses an extensive network of health care services, superior to most developing countries. As such, the majority of the population has easy access to a reasonable level of health care facilities provided by both the state and the private sector through the extension of

services to every corner of the country. Yet, due to resource constraints, both financial and personnel, services have failed to match the rapid growth in demand, leading to a decline in the quality of services over the years. Along with changing life styles, economic progress and technological improvements, the type of demand for health services has changed dramatically. With increasing income levels and greater awareness, people demand higher standards and more sophisticated health services. The Presidential Task Force (PTF) on Health Policy identified these issues and recommended a wide range of health sector reforms. The implementation of PTF recommendations was slow during 1998 and 1999, but gathered momentum in 2000. Diseases such as dengue haemorrhagic fever (DHF), Japanese encephalitis (JE), which have increased to epidemic proportions due to poor environmental conditions, threatening the country's health conditions in recent years. The intensity of the DHF out-break was serious during 2000. This re-emphasised the need for allocating sufficient resources for preventive health care services, through the budget, as the private sector does not normally involve itself in such activities. Currently, the private sector provides over 50 per cent of the curative health care needs of the country. Hence, by fortifying the private sector with an effective regulatory mechanism to increase its share in curative health care, the public sector would be free to divert more funds for financing preventive health care facilities in the country.

Following the PTF recommendations, five priority areas have been identified for health sector reforms. These are: the development of at least one hospital in each district; expansion of the health care needs of specific groups such as the elderly, the disabled, victims of war and conflict and promoting specific areas such as occupational health problems, mental health and estate health services; the development of health promotional programmes, with special emphasis on school health programmes; reforming the organisational structure of the health sector and addressing funding issues of the health sector such as resource mobilisation and management, resource sharing between the private and the public sectors and the rationalisation of human resource development.

The reforms referred to above were started in 1998 and continued through 2000 by the Health Sector Reform Implementation Unit set up for that purpose. In the case of the project on improving at least one hospital in each district, the first stage was completed in respect of 14 hospitals. Regarding the improvement of mental health services at the regional level, 2 such centres were operational, while 4 were in progress by end 2000. Action has also been taken to update the Mental Health Act, train

medical officers in psychiatry and mental health and appoint medical officers to mental health wards. In order to improve estate health care, 20 estate hospitals were taken over by the government during the past three years, while action was initiated to upgrade 33 estate hospitals. Meanwhile, a draft Bill to establish a Commission on National Health and Private Sector Medical Institutions is to be submitted to Parliament shortly. Action was taken to set up Provincial Health Authorities. More importantly, 253 Additional Medical Officers of Health were appointed to take care of school health programmes and special programmes relating to other vulnerable groups, at the regional level. A system was established to monitor the implementation of these activities at the provincial level. A lack of sufficient financial resources and trained health personnel have hindered the timely implementation of these health sector reforms. At the same time, as health services are a devolved subject, an active role and commitment of provincial councils would also be necessary for the successful implementation of these reforms.

The total public expenditure on health services amounted to Rs 20,696 million in 2000. The level of health expenditure in relation to GDP rose to 1.7 per cent from 1.4 per cent in 1999. In 2000, a sum of Rs 15,394 million was spent on maintenance of health services. This was an increase of 37 per cent. The total investment in the health sector, at Rs.5,302 million, grew by 19 per cent, compared to 3 per cent in the previous year.

According to the World Development Report 1998/99, the average public expenditure on health as a per cent of GDP in middle income countries was 3.0 per cent, while the world average was 3.2 per cent. The governments of high-income countries spent about 6.9 per cent of GDP on the health sector. In comparison, average public health expenditure in Sri Lanka, at about 1.4 per cent of GDP, is highly inadequate. At the same time, these resources are not fairly distributed among regional health institutions. In order to overcome the funding problem to some extent, a partial cost recovery system may be instituted. In this connection, it is important to note that the partial cost recovery system presently in operation at the Sri Jayawardenapura General Hospital has been a success.

The number of government hospitals providing Western medicine rose by 20 to 578 at end 2000, mainly due to the acquisition of estate hospitals. The total number of beds in these hospitals increased by 5 per cent to 58,310. Accordingly, the number of beds per 1,000 population in government hospitals increased to 3.1 from 2.9 in 1999. The total number of medical officers with MBBS qualifications in the public sector increased by 309 over the previous year to 6,266 at end 2000. Consequently, persons per doctor improved to 3,090 from 3,197 a year ago. Further, there were 1,352 Assistant Medical Practitioners

**TABLE 5.2**  
**Public Health Services**

| Item   | 1998   | 1999   | 2000(a) |
|--|--------|--------|---------|
| Hospitals                                    |        |        |         |
| (practicing Western medicine) (No.)          | 550    | 558    | 578     |
| No. of beds                                  | 53,737 | 55,436 | 58,310  |
| Central dispensaries (No.)                   | 389    | 383    | 389     |
| Total no. of doctors                         | 5,612  | 5,957  | 6,266   |
| Total no. of Assistant Medical Practitioners | 1,362  | 1,340  | 1,352   |
| Total no. of Ayurvedic physicians            | 15,359 | 15,785 | 16,161  |
| Total no. of nurses(b)                       | 14,448 | 14,052 | 14,750  |
| Total no. of attendants                      | 7,160  | 7,178  | 7,372   |
| Number of in-patients ('000)                 | 3,797  | 3,826  | n.a     |
| No. of out - patients ('000)                 | 41,071 | 41,325 | n.a     |
| Total health expenditure (Rs.Mn)             | 14,419 | 15,671 | 20,696  |
| Current expenditure (Rs.Mn)                  | 10,089 | 11,215 | 15,394  |
| Capital expenditure (Rs.Mn)                  | 4,330  | 4,456  | 5,302   |

(a) Provisional  
(b) 1998-1999 figures were revised as per the Annual Health Bulletin 1999

Sources: Ministry of Health & Indigenous Medicine  
Central Bank of Sri Lanka

(AMP) working in government hospitals. However, there was a severe shortage of medical specialists. In 1999, there were only 649 medical specialists of whom 51 per cent were in the Western Province. The shortage of medical specialists at district level was felt seriously. There were some districts without even a single specialist doctor. The nursing staff in public hospitals increased slightly to 16,161 during the year. At present, there exists an immediate need for over 3,000 nurses in public sector health institutions, as a sufficient number of nurses were not recruited for training in the past. As there were over 5,000 student nurses in 10 nursing training schools by end 2000, the shortage would be eliminated soon. There is an increasing demand for trained nurses in the private sector, as well as abroad. Steps have also been taken to train other technical staff such as pharmacists, radiographers, laboratory technicians, and physiotherapists.

The control of diseases showed mixed results in 2000. Gains were made in controlling certain diseases, while some diseases re-emerged to almost epidemic proportions. There was an increased incidence of DHF, reported from almost all parts of the country. There were 36 deaths due to DHF in 2000, when compared to 14 deaths in the previous years. Steps were taken by the health authorities to control DHF by strengthening surveillance activities, community health education and vector control activities with the support of local government authorities and community organisations. The incidence of whooping cough and tuberculosis (TB) has also been on the increase in recent years. The number of TB positive cases increased by 10 per cent to 4,316 in 2000. At the same time, gains were made in controlling malaria and filariasis. The reported cases of malaria, which increased after 1995, dropped by 21 per cent, while the number of deaths due to malaria dropped to 76 in 2000. The intensification of the Malaria Control Programme with World Health Organisation (WHO) and World Bank

assistance helped reduce the incidence of malaria. Similarly, the number of positive cases of filariasis too decreased by 18 per cent in 2000. The Anti Filariasis Campaign conducted a national programme with the objective of eliminating filariasis by using a single dose treatment, which was more effective in controlling the disease than the previously used multi-day treatment.

Several foreign and locally funded health projects were also in progress during 2000. The capacity of the Lady Ridgeway Children's Hospital was further expanded by adding a new building complex with 390 beds at a cost of Rs. 500 million. The People's Republic of China funded this project. The construction of another children's hospital has been planned at an estimated cost of Rs. 229 million at Peradeniya. The reconstruction and rehabilitation of the Gampaha and Negombo base hospitals were also in progress with financial assistance from Korea. The cardio-thoracic unit in the Kandy General Hospital was upgraded at a cost of Rs. 170 million, under a French loan facility. Improvements to the Matara Provincial Hospital and Ratnapura General Hospital were in progress with financial assistance from the Japan Bank for International Co-operation (JBIC). A magnetic resonance imaging (MRI) scanning machine was installed at the National Hospital at a cost of Rs. 78 million with locally raised funds.

### Private Sector Health Care

The private sector's involvement in providing health care facilities continued to expand in 2000. Out of 17 hospital projects that had been approved by BOI, 3 major hospital projects are at various stages of implementation. Despite free health care facilities provided by the public sector, the demand for private health care facilities has been on the

increase. According to the Ministry of Health (MOH), there are at present about 160 private health care institutions with over 4,000 beds. MOH estimates that there are about 800 qualified full-time private medical practitioners and about 3,500 part-time medical practitioners in the Western health care sector.

MOH has taken action to create a regulatory body with a view to strengthening and regulating private health care services. Accordingly, MOH has prepared the Private Medical Institutions Bill, which is to be presented in Parliament shortly. MOH also established a separate unit to co-ordinate with private health care institutions. Until the proposed regulatory system is properly established, MOH has commenced accepting complaints from the public about the health care provided by the private sector.

According to a postal survey conducted by the Central Bank covering 40 major private hospitals in the country, the performance of private hospitals showed a moderate growth in 2000. Total bed capacity of the five largest private hospitals in Colombo increased by 2 per cent to 849. The average number of permanent doctors in these five hospitals was 20, while the average number of qualified nurses was 165.

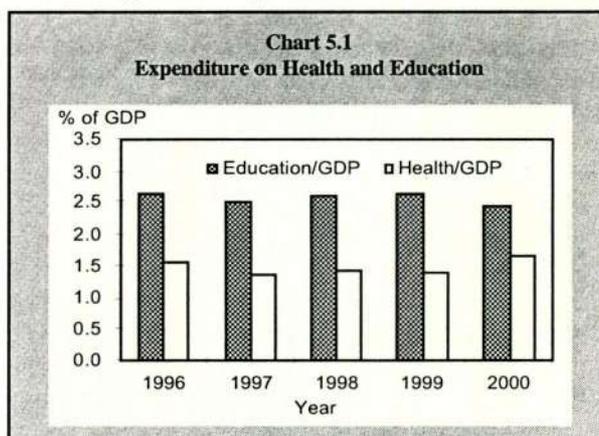
The main problems faced by private hospitals in Sri Lanka have been a lack of qualified nurses, technical staff and land for further expansion. According to MOH, action will be taken to recognise and strengthen private nursing training schools, in order to increase the supply of trained nurses. The training of technical staff is to be enhanced with the support of the private sector.

**TABLE 5.3**  
**Performance of Private Hospitals<sup>(a)</sup>**

|                        | 1999<br>No. | 2000<br>No. | Change<br>(%) |
|------------------------|-------------|-------------|---------------|
| 1 Hospital beds        | 1640        | 1760        | 7             |
| 2 No. of patients      |             |             |               |
| In-patients            | 88,476      | 103,772     | 17            |
| Out-patients(OPD)      | 1,357,156   | 1,405,632   | 4             |
| 3 Doctors              | 1,266       | 1,304       | 3             |
| Permanent              | 171         | 178         | 4             |
| Visiting               | 862         | 882         | 2             |
| Part-time              | 233         | 244         | 5             |
| 4 Nursing staff        | 4,536       | 4,745       | 5             |
| Nurses                 | 1,916       | 2,010       | 5             |
| Qualified              | 1,290       | 1,365       | 6             |
| Trainee                | 626         | 645         | 3             |
| Attendants             | 704         | 725         | 3             |
| 5 Other staff          | 1,874       | 2,151       | 15            |
| Technical staff        | 594         | 596         | 0             |
| Administrative staff   | 583         | 490         | -16           |
| Other (labourers etc.) | 697         | 1,065       | 53            |

Source: Central Bank of Sri Lanka

(a) As reported by 40 private hospitals located in the Western Province (22), Southern Province (7), Central Province (6), North Western Province (3), Eastern Province (1) and Uva Province (1).



### 5.3 Education

Educational reforms, encompassing all areas of primary, secondary and tertiary education, have been introduced with the broad objective of enhancing learning achievements at all levels, in line with the needs of a market driven economy. The qualities and attributes that are most sought after in the present day labour market, other than book knowledge, are versatility and adaptability, confidence to

face challenges, a positive work ethic, productivity and discipline, leadership and team work and most importantly, communication skills. These qualities are reported to be lacking in many students who complete the current educational programmes. The educational reforms that are being implemented are expected to address these issues so that the mismatch between educational attainments and labour market requirements could be minimised. General educational reforms, which were introduced in 1998 on a pilot basis in the Gampaha District, were extended to the whole island in 1999. According to an 'Independent Review of Progress in Educational Reforms in the Western Province' by the Sri Lanka Association for the Advancement of Education, students and teachers, as well as parents, have responded positively to these reforms. However, a lack of awareness of reforms among some reform executors has been identified as one of the factors which hinder its effective implementation. In addition, shortages and delays in receiving educational materials by schools, poor infrastructure facilities, inadequate financial resources and a lack of competence among teachers also hinder the successful implementation of reforms. Disparities in the distribution of available resources and information have also been observed. These problems were more severe in outlying districts than in the Western Province. Therefore, it is necessary to take early steps to correct any misalignment in the reform process in order to achieve good results.

With regard to university education, the reform process was slower than expected. The large unmet demand for higher education continues to exist mainly because of the scarcity of resources to expand higher education facilities of the state and barriers to entry by the private sector. In an effort to address these issues, a new tertiary education strategy was planned during the year. The University Grants Commission (UGC) recognised two institutions, viz., the Sri Lankan Institute of Information Technology (SLIIT) and the Naval and Maritime Academy (NMA) as degree awarding institutions, under the Universities Act. The Institute of Technology at the University of Moratuwa was also established in 2000. Meanwhile, the technical education and vocational training sector expanded further, in line with the recommendations made by the Presidential Task Force on Tertiary Education and Vocational Training.

The total government expenditure on education in 2000 amounting to Rs 30,930 million was an increase of 6 per cent over the previous year. The total expenditure in relation to GDP was 2.5 per cent in comparison to 2.6 per cent in 1999.

### General Education

The total number of government schools was 10,338 at end 2000, in comparison to 10,394 at end 1999. Some schools were closed as the student population in those schools had

fallen to very low levels. The student population in all government schools increased marginally to 4,190,657 in 2000, reversing the decrease experienced in 1999. By end 2000, on average, there was a school for every 6.7 sq. km. and the average student population in a school was 400. The total number of teachers in government schools increased by 2 per cent to 191,322 by end 2000, as 4,856 new teachers were recruited. However, the average student/teacher ratio stood unchanged at 22. In addition to government schools, there were 561 pirivena schools and 78 private schools, with a student population of 51,121 and 95,410, respectively. Further, according to the Ministry of Education there were about 95 international schools catering to around 60,000 students. In recent years, international schools have become more popular among parents because of the opportunities provided to students to gain admission to foreign universities and technical institutions.

The general education reforms introduced at grade 1 in 1999, were extended to grade 2 in 2000 and will be gradually extended to grade 5 by 2003. The reforms were simultaneously introduced to grade 6, 9 and 12 during 1999. Accordingly, the introduction of basic reforms to the entire general education system will be completed by 2003. However, these general educational reforms envisage not only changes in classroom teaching, but also reforms in a variety of other related activities. These include strengthening the teaching of English, developing of technical and practical skills of students, co-curricular activities, special education for handicapped students, counselling and career guidance, school based management and teacher education. The implementation of these proposals would be essential for education reforms to be successful. Further, the allocation of sufficient financial resources will be essential for timely implementation of reforms. The first G.C.E. (Advanced Level) examination under the new system was held in August 2000. A total of 115,882 students appeared for the examination and about 47 per cent qualified to apply for university admission, though the university system can accommodate only one sixth of these.

Along with the educational reforms, several programmes were introduced to improve infrastructure and support services. During 2000, to facilitate the proper implementation of reforms, 9,400 classrooms for students in grade 2 and 3 were rehabilitated and 170 laboratories were constructed for G.C.E. (Ordinary Level) students. Under the project to develop at least one school in each divisional secretariat division, 346 schools were selected, of which 134 schools were developed in 2000. With a view to introducing computer technology to school children, 1,565 computers were distributed among 615 schools. In addition, 261 new buildings were constructed and 755 buildings were refurbished during the year to start school libraries.

According to a survey conducted in 1997/98, it was revealed that there were about 61,000 non-school going children between the ages of 5 - 14 years. This constituted 1.4 per cent of those in that age group. During 2000, the authorities conducted 780 classes for about 15,000 of these children, while 6,000 children were admitted to schools. To increase the number of qualified teachers, 2,248 new students were recruited to National Colleges of Education in 2000. Meanwhile, the teacher education service was strengthened by recruiting 110 educationists during 2000. In addition, 4,000 teachers were trained in teacher training colleges during 1999/2000.

In the current context, the importance of Information Technology (IT) in the educational system has been well recognised. The private sector has taken the leadership in

training IT personnel demanded by the market. Several private IT institutions conduct degree programmes by linking themselves with foreign universities. In the state sector, the University of Moratuwa, Institute of Computer Technology (ICT) of the University of Colombo and the National Institute of Business Management are the main institutions providing IT education. ICT commenced an external degree programme (Bachelor of Information Technology - BIT) in 2000. The Sri Lanka Institute of Information Technology (SLIIT) was established with the objective of producing 2,000 IT professionals per year, when it is fully operational. Action was taken to establish 50 IT centres in rural areas with private sector participation and link them with the proposed IT parks at Malabe, Kesbawa and Pugoda.

**TABLE 5.4**  
**General and University Education**

| Item  | 1998<br>No. | 1999<br>No. | 2000(a)<br>No. |
|---|-------------|-------------|----------------|
| <b>General education</b>                          |             |             |                |
| 1. Total schools                                  | 10,947      | 11,031      | 10,977         |
| Government schools                                | 10,313      | 10,394      | 10,338         |
| o/w National schools                              | 270         | 310         | 317            |
| Other schools                                     | 634         | 637         | 639            |
| Private   | 79          | 77          | 78             |
| Privenas  | 555         | 560         | 561            |
| 2. Pupils   | 4,278,290   | 4,277,104   | 4,337,188      |
| Government schools                                | 4,134,838   | 4,134,026   | 4,180,657      |
| Other schools                                     | 143,452     | 143,078     | 146,531        |
| Private   | 91,536      | 93,445      | 95,410         |
| Privenas  | 51,916      | 49,633      | 51,121         |
| 3. New admissions                                 | 353,047     | 343,230     | 331,643        |
| 4. Teachers                                       | 196,305     | 196,726     | 199,906        |
| Government teachers                               | 188,029     | 188,340     | 191,322        |
| Others  | 8,276       | 8,386       | 8,584          |
| 5. Pupil/teacher ratio<br>(government schools)    | 22          | 22          | 22             |
| 6. Total expenditure on<br>education (Rs. Mn) (b) | 26,694      | 29,294      | 30,930         |
| Current   | 20,582      | 21,642      | 23,795         |
| Capital   | 6,112       | 7,652       | 7,135          |
| <b>University education</b>                       |             |             |                |
| 1. Universities                                   | 12          | 13          | 13             |
| 2. Students (c)                                   | 38,594      | 41,584      | 48,296         |
| 3. Lecturers (d)                                  | 3,050       | 3,228       | 3,241          |
| 4. Number graduating                              | 6,758       | 8,787       | n.a            |
| Arts and Oriental studies                         | 2,518       | 3,613       | n.a            |
| Commerce &<br>Management studies                  | 1,180       | 1,271       | n.a            |
| Law   | 171         | 325         | n.a            |
| Science   | 1,110       | 1,418       | n.a            |
| Engineering                                       | 551         | 631         | n.a            |
| Medicine  | 812         | 1,049       | n.a            |
| Dental surgery                                    | 42          | 70          | n.a            |
| Agriculture                                       | 250         | 298         | n.a            |
| Veterinary science                                | 50          | 35          | n.a            |
| Architecture                                      | 25          | 46          | n.a            |
| Quantity surveying                                | 49          | 31          | n.a            |
| 5. New admissions for basic degrees               | 11,315      | 11,896      | 11,805         |

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

(a) Provisional

(b) Includes government expenditure on higher education

(c) Excluding the Open University of Sri Lanka

(d) At the beginning of the year.

### Higher Education

In 2000, there were 13 national universities, including the Open University of Sri Lanka. The total student population was 69,007 at end 2000, which included 17,064 students of the Open University. New admissions to universities, other than the Open University, stood at 11,805 in the 2000/01 academic year. This is about 16 per cent of the students who acquired the minimum eligibility requirements for university entrance and about 7 per cent of the total number of students who sat for the G.C.E.(A/L) examination. The student/teacher ratio at universities further improved to 12.6 in 2000. New admissions to the Open University programmes were 5,349 in 2000. In addition to first degrees, many universities offered post-graduate degrees. There were six Post-graduate Institutes affiliated to universities. The total enrolment for post-graduate studies was 3,617. There are 7 institutes affiliated to universities, which offer Bachelor's degrees in specialised fields. The Institute of Technology is the latest and was established in 2000, at the University of Moratuwa. The total student enrolment in these institutions was 3,045 in 2000. UGC granted degree-awarding status to SLIIT, which has been established as a government owned company to conduct diploma and certificate courses in IT. Similarly, the Naval Maritime Academy (NMA) of the Sri Lanka Navy has also been granted the status of a recognised institution under the Universities Act, to conduct courses under the supervision of the University of Kelaniya. There are a variety of private sector institutions capable of conducting degree level courses, especially in technical fields and business management, provided they are recognised and accreditation is granted. A few private sector educational institutions already offer degree programmes in collaboration with foreign universities.

Several initial steps were taken to implement university education reforms in 2000. The major components of the university education reforms are curriculum reforms, establishment of career guidance services, staff

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

### Technical Education and Vocational Training

The Technical Education and Vocational Training (TEVT) sector further expanded in 2000, in line with the recommendations of the Presidential Task Force (PTF) on TEVT. The TEVT sector consists of technical colleges, other public and private training organisations and training institutions managed by NGOs. The target group for TEVT includes unemployed youth, rural women, school leavers and other disadvantaged and low income groups. The ongoing TEVT reforms concentrate on major areas such as the role of the government, the involvement of the private sector in TEVT, the linkage between general education, university education and TEVT, and training for self-employment and the unorganised sector.

The Tertiary and Vocational Education Commission (TVEC), the apex policy setting and regulatory body in the TEVT sector, took a number of measures for the systematic development of the sector. In 2000, the Commission prepared and published vocational education and training plans for three priority sectors, viz., rubber and plastics, food and beverages and automobile repair and maintenance. The Commission launched a programme to prepare national training standards for training courses to provide a basis for accreditation of training courses conducted by reputed organisations. The Commission prepared 29 national training standards, which were considered to be instrumental for quality assurance in TEVT.

The Department of Technical Education and Training (DTET) admitted 12,902 new students to 36 technical

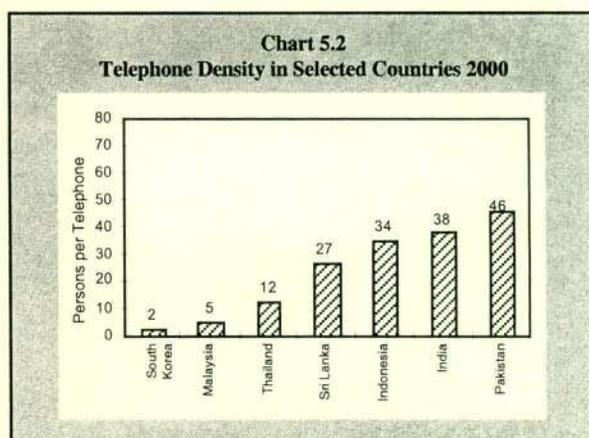
colleges in 2000. The total number of students enrolled to follow courses was 17,310 at end 2000. Career guidance and counseling centres were established in 6 technical colleges during the year. The Sri Lanka Institute of Advanced Technical Education (SLIATE) conducted higher national diploma courses in engineering, accountancy, commerce and business studies in 11 colleges, in different parts of the country.

The Vocational Training Authority of Sri Lanka (VTA), concentrated mainly in rural areas, has 6 rural vocational training centres and 13 district centres in various parts of the country. The total enrollment in VTA training centres stood at 18,927 at end 2000. The National Apprentice and Industrial Training Authority (NAITA) conducted about 180 courses during 2000, and a total of 231,777 students were enrolled in these courses.

## 5.4 Communication Services

### Telecommunications

The rapid growth in the telecommunications sector in recent years continued in 2000. In terms of the subscriber base, the telecommunications sector grew by about one third in 2000, after a similar growth in 1999. The subscriber base of telephone services, including mobile telephones, exceeded the 1 million mark in 2000. The unprecedented growth in the telecommunications sector stems from the restructuring of the telecommunications industry during the early 1990s and subsequent privatisation of Sri Lanka Telecom (SLT) in 1997. By end 2000, there were 37 telecommunication system operators including SLT. There were three companies to provide fixed access telephone facilities in the country, while four companies provided mobile services. The telephone density (telephones per 100 persons) for fixed access lines increased to 4 in 2000 from 3.5 in 1999. The subscriber network for mobile phones grew rapidly by over 75 per cent in 2000. As a result, telephone density including cellular phones increased to 6.3 from 4.4 in 1999.



The rapid development in technology helped bring a convergence of all communication modes by integrating voice and data communications, internet, e-mail, television, broadcasting, video conferencing, business communications etc. The private sector led telecommunications industry in Sri Lanka is now in a position to adopt new technology to provide a better service to end users. However, to expect better performance, regulatory aspects need to be further strengthened to create a level playing field for investors, speed up the settlement of disputes, eliminate unlawful competition, achieve universal distribution of facility and look after the interests of end users. In this respect, the reforms introduced in the telecommunications sector in the 1990s, now need to be redirected with a long-term vision to provide innovative telecommunications products to the general public on a universal basis and at a cost effective price.

Telecommunications facilities provided by SLT expanded significantly in 2000. SLT continued to hold a monopoly for fixed land phones and international calls. The monopoly for international calls will expire in 2002. SLT completed its medium term investment plan in 2000 and therefore, the number of new telephone connections provided in 2000 was lower than in 1999. The subscriber network in the regions outside the Colombo Metropolitan area grew faster than in the Colombo Metropolitan area. Meanwhile, the total number of international circuits was increased by 16 per cent during the year. The demand for fixed land phones provided by SLT continued to expand. The registered applicants for SLT telephones expanded by 5 per cent in 2000, of which 87 per cent were outside the Colombo Metropolitan region.

**TABLE 5.5**  
**Growth of Postal and Telecommunication Services**

| Item   | 1998    | 1999    | 2000(a) | Percentage Change |         |
|--|---------|---------|---------|-------------------|---------|
|  |         |         |         | 1999              | 2000(a) |
| <b>1. Postal service</b>                       |         |         |         |                   |         |
| Delivery areas (No)                            | 6,729   | 6,729   | 6,729   | 0.0               | 0.0     |
| Post offices (No)                              | 4,362   | 4,438   | 4,488   | 1.7               | 1.1     |
| Public   | 4,036   | 4,040   | 4,049   | 0.1               | 0.2     |
| Private  | 250     | 298     | 316     | 19.2              | 6.0     |
| Rural agency                                   | 76      | 100     | 113     | 31.6              | 13.0    |
| Estate agency                                  | -       | -       | 10      | -                 | -       |
| Area served by a post office (Sq.Km)           | 15.0    | 14.8    | 14.6    | 0.0               | 0.0     |
| Population served by a post office             | 4,304   | 4,338   | 4,243   | 0.8               | 2.2     |
| Letters per inhabitant                         | 23      | 23      | 25      | 0.0               | 8.7     |
| <b>2. Telecommunication services</b>           |         |         |         |                   |         |
| <b>2.1 Sri Lanka Telecom Ltd. (SLT)</b>        |         |         |         |                   |         |
| Telephone lines in service (No.)               | 455,598 | 580,199 | 653,144 | 27.3              | 12.6    |
| New telephone connections given(No.)           | 143,075 | 133,709 | 90,647  | -6.5              | -32.2   |
| Applicants on waiting list (No.)               | 224,411 | 236,225 | 248,486 | 5.3               | 5.2     |
| Expressed demand for telephones (No.)          | 680,009 | 816,424 | 901,630 | 20.1              | 10.4    |
| Telephone density (telephones per 100 persons) | 2.43    | 3.05    | 3.38    | 25.5              | 10.8    |
| <b>2.2 Other private sector</b>                |         |         |         |                   |         |
| <b>Cellular phones</b>                         |         |         |         |                   |         |
| Operators (No.)                                | 4       | 4       | 4       | 0.0               | 0.0     |
| Subscribers (No.)                              | 174,202 | 256,655 | 451,269 | 47.3              | 75.0    |
| Total cumulative investment ( Rs. Mn.)         | 8,842   | 9,941   | 19,981  | 12.4              | 0.2     |
| <b>Public pay phones</b>                       |         |         |         |                   |         |
| Operators (No.)                                | 6       | 6       | 6       | 0.0               | 0.0     |
| Subscribers (No.)                              | 4,761   | 5,799   | 8,186   | 21.8              | 41.2    |
| Total cumulative investment ( Rs. Mn.)         | 1,064   | 1,064   | 1,085   | 1.9               | -       |
| <b>Radio paging services</b>                   |         |         |         |                   |         |
| Operators (No.)                                | 5       | 4       | 4       | -20.0             | 0.0     |
| Subscribers (No.)                              | 10,511  | 10,300  | 7,009   | -2.0              | -32.0   |
| Total cumulative investment ( Rs. Mn.)         | 222     | 222     | 222     | 0.0               | 0.0     |
| <b>Data communication services</b>             |         |         |         |                   |         |
| Operators (No.)                                | 10      | 20      | 21      | 100.0             | 5.0     |
| Subscribers (No.)                              | 20,789  | 26,968  | n/a     | 29.7              | n/a     |
| o/w Internet and e-mail                        | 18,984  | 25,535  | 40,497  | 34.5              | 58.6    |
| Total cumulative investment ( Rs. Mn.)         | 768     | 854     | 911     | 11.2              | 6.7     |
| <b>Wireless local loop telephones</b>          |         |         |         |                   |         |
| Operators (No.)                                | 2       | 2       | 2       | 0.0               | 0.0     |
| Subscribers (No.)                              | 67,931  | 91,717  | 114,267 | 35.0              | 24.8    |
| Total cumulative investment ( Rs. Mn.)         | 9,291   | 12,762  | 14,779  | 37.4              | 15.8    |

(a) Provisional

Sources: Department of Posts  
Sri Lanka Telecom Ltd.  
Telecommunications Regulatory  
Commission of Sri Lanka

Along with the increase in capacity, the efficiency of the SLT network has improved with a 60-70 per cent call completion rate being achieved in respect of International Direct Dial (IDD) calls during 2000. SLT paid special attention to network maintenance to reduce the fault occurrence rate, while taking steps to rectify reported faults as soon as possible.

Most of the major telecommunications development projects that were started in previous years were completed by end 2000. During 2000, SLT invested Rs.8,700 million in the telecommunications sector in comparison to Rs.14,992 million in 1999. SLT raised Rs.1,500 million by way of a debenture issue to partly finance its investments in 2000. In addition, several telecommunications projects are being implemented with financial assistance from JBIC, the Swedish International Development Agency (SIDA) and the Economic Development Co-operation Fund (EDCF) of Korea, in 2000.

The revenue of SLT increased by 6 per cent to Rs.19,385 million in 2000 compared with an increase of 9 per cent in 1999. This increase was the combined outcome of an expansion of the subscriber network and upward tariff revision, moderated by a fall in foreign exchange earnings during the year. In terms of the tariff revision for rebalancing the tariffs, domestic call charges were raised by an average rate of 20 per cent, while IDD call charges were reduced by about 8 per cent. The tariff rebalancing process, which commenced in 1998, would be continued until the cross subsidy from IDD calls to domestic calls is eliminated totally or reduced substantially. Meanwhile, the operating expenditure of SLT increased by 10 per cent to Rs.14,534 million. This yielded an operating profit of Rs.4,851 million in 2000, a decline of 5 per cent compared with last year.

The telecommunications market in Sri Lanka has become increasingly more competitive, especially for cellular mobile telephones, data communications services, wireless fixed access services and pay phone services. Cellular telephones have now become affordable to most prospective users, while subscription rates for Internet and e-mail services have been substantially reduced. The cumulative investment in the telecommunications sector, excluding SLT, increased to Rs. 27 billion from Rs.24 billion a year ago. The number of subscribers for cellular mobile telephones rose sharply in 2000. The total cumulative investment by these suppliers amounted to Rs. 9,961 million by end 2000. There were two wireless fixed access telephone operators in the market. Their supply of telephones increased by 25 per cent in 2000. The number of pay phone booths provided by 6 operators increased by 41 per cent in 2000. Data communication services also grew substantially in 2000, due to the expansion of the subscriber network for e-mail and Internet services. However, the number of subscribers to radio paging

services further declined, mainly due to the shifting of subscribers from paging services to cellular mobile services as the latter has now become more affordable.

### Postal Services

With rapid growth in telecommunications technology, the traditional postal service is being challenged by innovative modes of electronic communications, which are fast, reliable, convenient and cost effective. Recognising this, the government has planned postal sector reforms in order to meet the needs of society and the market driven economy. Accordingly, a draft Bill to reform the Department of Posts (DOP) was prepared and has been presented to a committee for further review before being presented to Parliament. In the meantime, within the existing framework, DOP has commenced a programme to modernise a selected number of post offices with World Bank assistance.

The post office network further expanded in 2000, with special attention paid to the development of estate sector postal services. For the first time, 10 Estate Agency Post Offices (EAPO) were established during 2000. Consequently, the area served by a post office dropped marginally to 14.6 sq. km in 2000, while the population served by a post office dropped by 2 per cent to 4,243. The average number of letters per inhabitant, handled by the Department of Posts, increased. Similarly, the number of both inland and foreign mail articles handled by the public sector post offices increased.

The postal shop concept, commenced in 1999 as a pilot project to sell postal products as well as other consumer products, was expanded further in 2000, with 6 more postal shops. The Post Fax service and the Fax-Money Order service were further expanded and by end 2000, there were 192 post offices with such facilities. DOP has already provided e-mail facilities to 28 main post offices in all districts, except in the Northern Province. The International Express Mail Service (EMS) and Local Speed Post Service also gained popularity among the public. During 2000, telephone facilities were provided to 930 sub-post offices. In addition, DOP commenced an e-commerce service to expand the services of the Sri Lanka Philatelic Bureau and commenced forwarding foreign employment applications through the Internet and e-mail. An Information Technology unit was opened in the Department for these purposes. During the year, 25 new post office buildings were constructed at a cost of Rs.163 million.

The reforms recommended for the Department have been unduly delayed due to resistance from various interested parties. In view of the changing role of postal services the world over, a redirection of the functions of the local postal service is imperative for its sustainability. The services of a post office could be extended to cover a wider range of activities such as banking, insurance, social

security and information technology, which could be provided in competition with the private sector. However, it is necessary for DOP to implement its reforms and make it cost efficient, if it is to gain a competitive edge over the private sector in such services.

The total revenue of DOP grew by 7 per cent to Rs.2,033 million in 2000. As the operating expenditure amounted to Rs.2,221 million, its operating loss amounted to Rs 188 million in 2000. Such losses have been a continuing feature for many years.

## 5.5 Energy

In 2000, the energy supply was adversely affected by reduced hydropower generation and a turbulent crude oil market. The demand for electricity and petroleum products grew by 9 per cent and 14 per cent, respectively. The drought that prevailed in the catchment areas severely affected hydropower generation. Except in October, water storage in reservoirs remained below 50 per cent. The water storage of reservoirs, which was 44 per cent of capacity at the beginning of 2000, dropped continuously to about 16 per cent by mid year, compelling the Ceylon Electricity Board (CEB) to resort extensively to expensive thermal power generation. As the installed thermal power capacity was insufficient, CEB had to hire several power plants from the private sector, which further increased generation costs. The electricity tariff was increased by an average of 6 per cent with effect from June 2000 but this was not sufficient to cover escalating costs of generation. As a result, CEB faced severe financial difficulties towards the end of 2000. Meanwhile, in the petroleum sector, the average import price (c&f) of crude oil increased sharply by about 50 per cent, to an average of US dollars 28.30 per barrel in 2000. This situation initially led to a substantial deterioration in the financial position of the Ceylon Petroleum Corporation (CPC), as there was no in-built flexibility in the revision of local prices to adjust for changes in petroleum import prices. This forced CPC to depend heavily on bank borrowings to finance its operations. However, in order to reduce losses of CPC, the government allowed increases in local prices of petroleum products on four occasions during 2000.

### Electricity

The total installed capacity of electricity generation increased by 5 per cent to 1,779 MW in 2000. The share of independent (private) power producers (IPP) in the total capacity increased to 10 per cent in 2000 from 6 per cent in 1999 after commissioning the 60 MW barge mounted power plant and the installation of a 21 MW diesel power plant by a private generator, viz., Lakdhanavi (Pvt) Ltd during the year. CEB's installed capacity remained unchanged at 1,593 MW, comprising 1,137 MW of hydropower, 453 MW of thermal power and 3 MW of wind

power. With the increase in private thermal power capacity, the reliance on hydropower further dropped to 65 per cent from 67 per cent a year ago. As it was not possible to utilise the hydropower capacity at its optimal level during 2000, CEB had to obtain several power plants from the private sector on a temporary basis to meet the demand. By end 2000, the capacity of hired power plants stood at 58 MW.

Electricity generation rose by 11 per cent to 6,843 GWh in 2000. In the power generation mix, the share of hydropower dropped from 67 per cent in 1999 to 46 per cent in 2000, mainly due to the drop in the CEB's hydropower generation. Consequently, thermal power generation from CEB sources increased sharply by 58 per cent, while thermal power purchased from the private sector increased by 81 per cent. The share of the private sector in total generation increased significantly from 8 per cent in 1999 to 14 per cent in 2000, mainly due to the availability of the barge mounted power plant since June 2000. Power generation from private mini-hydro power plants more than doubled in 2000 due to the commissioning of several small power plants during the year. The hired power plants added 364 GWh of electricity to the national grid, while self-generation schemes added 157 GWh during the year.

The total electricity consumption grew faster in 2000 than in 1999, mainly due to the expansion of electricity consumption in the domestic sector, following a 10 per cent expansion of the domestic consumer network. The estimated proportion of households with electricity increased from 54 per cent in 1999 to 58 per cent by end 2000. However, the average consumption of electricity by a household remained almost unchanged at 70 kWh per month. Electricity consumption in the industrial sector rose by 8 per cent, while the number of industrial consumers increased by 6 per cent. Electricity demand in the commercial sector also increased with an increase in the consumer network.

The gap between total electricity generation, excluding self-generation, and total electricity sales indicates a system loss of 22 per cent, which is excessive by any standard. The systems loss has gradually increased from around 17 per cent a few years ago, despite substantial improvements made to the power transmission and distribution networks. The rapid expansion of rural electrification programmes, delays in fixing breakdowns, illegal connections and delays in fixing electricity meters are responsible for system losses. The high level of system losses imposes a burden on consumers, since such losses have to be passed on to them by way of increased tariff. Hence, it is of utmost importance for CEB to reduce such losses to an acceptable level through improvement in the system and effective enforcement of charges.

**TABLE 5.6**  
**Performance of the Power Sector**

| Item                      | Unit | 1998      | 1999      | 2000(a)   | Percentage Change |         |
|---------------------------|------|-----------|-----------|-----------|-------------------|---------|
|                           |      |           |           |           | 1999              | 2000(a) |
| Available capacity        | MW   | 1,636     | 1,691     | 1,837     | 3                 | 9       |
| Installed capacity        | "    | 1,636     | 1,691     | 1,779     | 3                 | 5       |
| CEB - Hydro               | "    | 1,137     | 1,137     | 1,137     | 0                 | 0       |
| Thermal                   | "    | 405       | 453       | 453       | 12                | 0       |
| Wind                      | "    | -         | 3         | 3         | -                 | 0       |
| Private - Hydro           | "    | 2         | 6         | 12        | 200               | 100     |
| Thermal                   | "    | 92        | 92        | 174       | 0                 | 89      |
| Hired private power       | "    | -         | -         | 58        | -                 | -       |
| Units generated           | GWh  | 5,683     | 6,184     | 6,843     | 9                 | 11      |
| CEB - Hydro               | "    | 3,909     | 4,152     | 3,154     | 6                 | -24     |
| Thermal                   | "    | 1,246     | 1,396     | 2,205     | 12                | 58      |
| Wind                      | "    | -         | 3         | 3         | -                 | 0       |
| Private - Hydro           | "    | 6         | 18        | 43        | 200               | 139     |
| Thermal                   | "    | 390       | 507       | 917       | 30                | 81      |
| Hired private power       | "    | 18        | -         | 364       | 0                 | 0       |
| Self generation           | "    | 114       | 108       | 157       | -5                | 45      |
| Total sales by CEB        | "    | 4,521     | 4,809     | 5,259     | 6                 | 9       |
| Domestic and religious    | "    | 1,378     | 1,555     | 1,732     | 13                | 11      |
| Industrial (b)            | "    | 1,614     | 1,613     | 1,755     | 0                 | 9       |
| Commercial                | "    | 758       | 829       | 895       | 9                 | 8       |
| Bulk sales to LECO        | "    | 722       | 762       | 825       | 6                 | 8       |
| Street lighting           | "    | 49        | 50        | 52        | 1                 | 4       |
| Composition of LECO sales | "    | 661       | 707       | 755       | 7                 | 7       |
| Domestic and religious    | "    | 315       | 340       | 367       | 8                 | 6       |
| Industrial (b)            | "    | 173       | 184       | 193       | 6                 | 5       |
| Commercial                | "    | 119       | 130       | 143       | 9                 | 10      |
| Street lighting           | "    | 15        | 15        | 16        | 0                 | 7       |
| Other                     | "    | 39        | 38        | 36        | -3                | -5      |
| System loss               | "    | "         | "         | "         | "                 | "       |
| CEB                       | %    | 18.8      | 20.9      | 21.3      | 11.2              | 2.0     |
| LECO                      | "    | 8.4       | 7.2       | 8.5       | -14.3             | 18.0    |
| Overall                   | "    | 19.9      | 21.8      | 22.4      | 9.5               | 2.8     |
| Number of Consumers (c)   | No.  | 2,333,560 | 2,570,177 | 2,817,769 | 10                | 10      |
| Domestic and religious    | "    | 2,053,772 | 2,268,805 | 2,493,412 | 10                | 10      |
| Industrial                | "    | 27,832    | 29,303    | 31,131    | 5                 | 6       |
| Commercial                | "    | 251,956   | 272,069   | 293,226   | 8                 | 8       |

- (a) Provisional  
(b) Excluding self generation  
(c) Inclusive of LECO consumers

Sources: Ceylon Electricity Board  
Lanka Electricity Co Ltd.

The cost of power generation rose significantly in 2000 due to both increased reliance on thermal power and high oil prices. The fuel cost of CEB more than tripled, causing the average fuel cost of generating a unit of power at thermal power stations to rise from Rs.2.37 in 1999 to Rs.4.01 in 2000. The unit cost of power purchased from the private sector also increased from Rs.4.73 in 1999 to Rs.5.51 in 2000 due to increased fuel charges. In comparison, the average cost of a unit of power generated by the hired power plants was very high at about Rs.9.52 per unit, excluding maintenance cost. The fuel cost of hired power plants amounted to Rs.1,888 million, while rental charges amounted to Rs.1,551 million. The average cost of emergency power, which was also categorized under the private power, was much higher. Overall, the all-inclusive average cost of power to CEB increased by 47 per cent to Rs.6.31 per kWh in 2000. However, the average tariff in 2000 increased only by about 4 per cent to Rs.4.60 per

kWh. The total revenue of CEB in 2000 amounted to Rs.26,373 million, while the operating expenditure amounted to Rs.33,101 million, resulting in an operating loss of Rs.6,728 million in 2000, compared to an operating profit of Rs.4,239 million in the previous year. Hence, CEB had to obtain bank financing to fund its operations and therefore by end 2000, its short-term loans were in excess of Rs.4,000 million. This has affected CEB's financial performance. CEB imposed a surcharge of 25 per cent on electricity consumption in early 2001, as a temporary measure considering the sharp rise in the cost of generation. Hence, a consistent pricing policy, which is flexible enough to absorb temporary shocks as well, needs to be introduced to maintain financial stability.

The total investment expenditure of CEB amounted to Rs.15,590 million, of which nearly 50 per cent was financed from foreign sources. Major investment projects of CEB included the Kukule Ganga hydro power project (80

## Box 7

## Options for Low Cost Power Generation

The demand for electricity in Sri Lanka has been growing at an average annual rate of 8 per cent and is expected to grow at the same pace in the foreseeable future. The present demand for electricity will double to around 9,600 GWh by 2010. At present, hydropower is the main source of commercial energy in the country. Although the cost of generating hydro power is relatively low, high dependence on hydropower is risky, as hydropower generation is highly vulnerable to weather conditions. In addition, almost all economically sound and environmentally acceptable major hydropower sources have been harnessed over the last two decades. In response to these supply constraints, dependence on thermal power was increased from 21 per cent in 1990 to 35 per cent in 2000 (Chart I). As the price of oil rose sharply in 2000, there was a substantial increase in the cost of electricity generation, leading to deterioration in the CEB's financial condition because power tariffs had not been adjusted in time to cover the cost. Belatedly, CEB was compelled to impose a surcharge on all electricity consumers to cover the additional cost arising from the increase in oil prices. The cost of electricity is likely to vary in line with changes in the international oil prices, which have again began to fluctuate widely. High electricity costs, adversely affect the cost of living and reduce the external competitiveness of producers, particularly of exporters. Maintaining low electricity prices comparable to those in other countries is essential as 75 per cent of the export industries are highly dependent on electricity. There is no option other than to shift to alternative low cost power sources.

At present, the share of hydropower in the total installed capacity is about 65 per cent or 1,150 MW. The major hydropower schemes in the country have been developed in the Mahaweli (660 MW) and Kelani (335 MW) river basins. The Kukule Ganga (70 MW) and Upper Kotmale (150-MW) hydropower projects are expected to be completed by 2003 and 2006, respectively. Other potential hydropower projects that are being considered to be developed are Ging Ganga (49MW), Broadland (40MW) and Moragolla (27 MW).

The major problem associated with the existing hydro electricity generating systems is inadequate generating capacity to meet the demand at peak periods, and their inability to ensure continuous supply over the whole year due to vulnerability to weather conditions. In addition, all identified hydro projects, which are to be developed, are not economically viable and even if developed, would be inadequate to meet future demand. Further, development of hydro resources is also constrained by threats to the environment arising from construction of reservoirs. These problems include soil erosion, silting of reservoirs and the inundation of fertile lands to construct reservoirs.

Development of thermal power projects should be considered in terms of cost effectiveness, environmental consequences, capacity and reliability. The generation costs

of thermal power depend on the type of power plant, type of fuel used, fuel prices and operating and maintenance

TABLE I  
Average Fuel Cost by Plant Type  
(at 1999 Prices)

| Type of fuel used           | Gas Turbine<br>120MW | New Gas<br>Turbine<br>115MW | K'issa<br>Steam<br>44MW | Sapitugakanda        |                   |
|-----------------------------|----------------------|-----------------------------|-------------------------|----------------------|-------------------|
|                             |                      |                             |                         | Plant I<br>72 MW     | Plant II<br>80 MW |
| Unit Cost at<br>33 KV level | Auto Diesel<br>10.05 | Auto Diesel<br>8.11         | Furnace Oil<br>4.24     | Residual Oil<br>3.30 | 2.93              |

Source: Ceylon Electricity Board

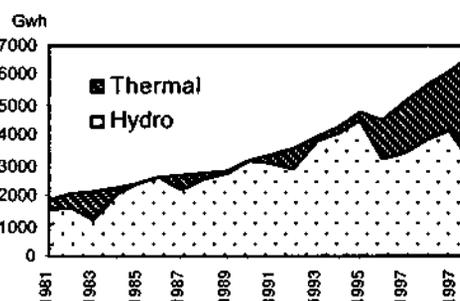
cost. The following table gives a comparison of the overall cost of various types of thermal power plants.

Residual fuel fired power plants generate electricity at lowest cost, which is less than 30 per cent of the cost of power generated from gas turbine.

CEB's average cost of electricity generation gradually increased from Rs.2.11 per unit in 1991 to Rs. 6.31 per unit in 2000, mainly due to increasing reliance on thermal power, increase in fuel prices and purchase of power from private suppliers. The average cost of private power was Rs.5.69 per unit in 2000. At present, Sri Lanka's average electricity price applicable to the industrial sector (US cts.7.4 per KWh) is considerably higher than that of most of other Asian countries (Indonesia US cts 3.0, Singapore US cts 5.3, Malaysia US cts 5.7 and Thailand US cts 5.8) except the Philippines (US cts. 8.5).

It has been estimated that proven petroleum reserves in the world will last for about 40 years. The largest quantity of oil deposits is concentrated in the Middle East countries. However, the social and political instability in this region is such, that an uninterrupted supply of petroleum to the market cannot be ensured. Moreover, with the influence of the cartel of oil exporting countries, it is

Chart I  
Electricity Generation 1981 - 2000



Source: Ceylon Electricity Board

**Box 7 (Contd.)**

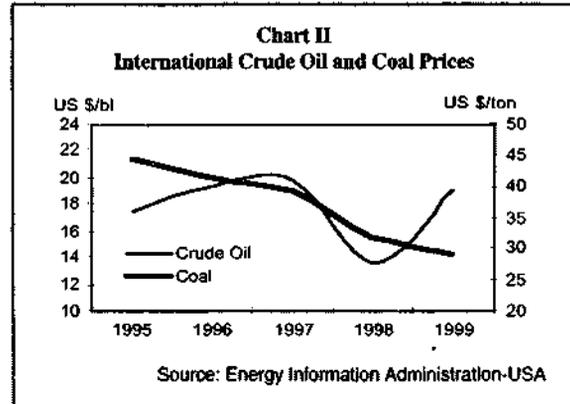
difficult to expect a downturn in oil prices in the long term. In terms of cost effectiveness, coal is considered to be the best option available at present for thermal power generation.

Unlike oil deposits, which are concentrated in the Middle East, coal deposits are widely spread all over the world and these deposits are away from the present political and social 'conflict centers', ensuring the likelihood of continuous supply. It has been estimated that coal deposits in the world are sufficient for another 230 years. During the last 13 years, coal prices have remained between US dollars 44.50 (in 1985) and US dollars 28.79 (in 1999) per metric ton, a declining price trend, despite rising demand for coal (Chart II). Therefore, it is reasonable to assume that coal prices would remain stable in the long term.

Coal power plants generate electricity at the lowest cost (Chart III). Further, installation cost as well as time taken for construction of coals power plants are relatively less in comparison to hydropower plants.

According to CEB's Long-term Generation Expansion Plan (1999-2013), power generation would need to be increased from 6,800 GWh in 2000 to about 15,000 GWh in 2013 (Chart IV). The share of hydro power is expected to decrease to 32 per cent. The balance will be met by thermal power generation. The share of coal power would increase from 28 per cent in 2004 to 61 per cent in 2013. In the absence of coal power, there would be a shortage of power to the same magnitude, unless alternative power sources are developed.

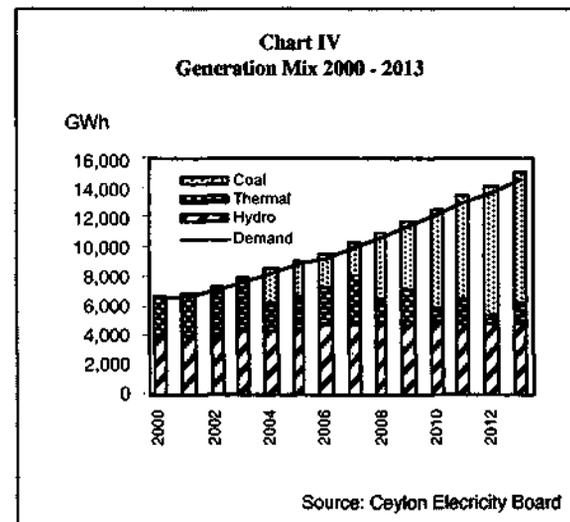
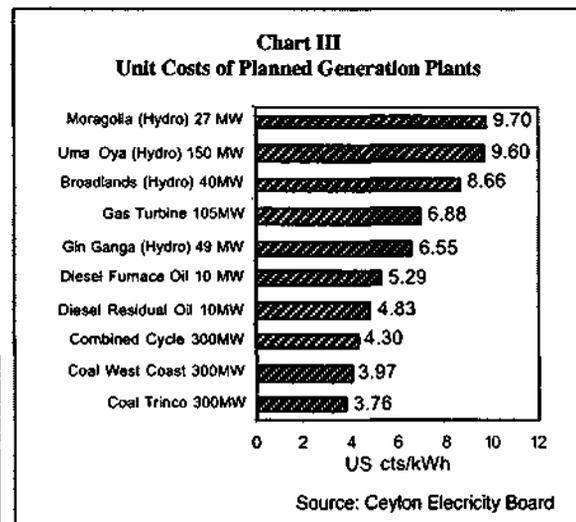
At present, 22 developed countries in the West and 13 countries in Asia and Eastern Europe are using coal as the main fuel for electricity generation. Coal power accounts for 21 per cent of the total primary energy supply of the world. The construction of coal power plants in Sri Lanka has been adversely affected by action on the part of various parties, on environmental and social grounds. These adverse consequences can be minimised by using high quality coal with low Sulfur content that could be imported from South



Africa and Australia. Technology is now available to construct coal power plants that would minimise pollution.

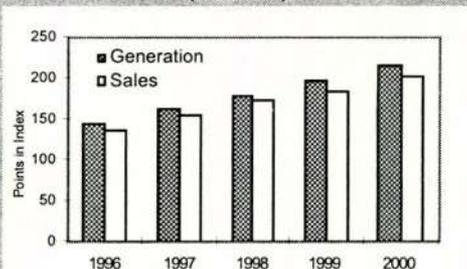
The relative advantage of coal power when compared with other sources of power generation, such as liquefied natural gas, wind power, solar energy, wave energy, bio-mass, geo-thermal energy and saw dust is quite clear. Wind power is an option for Sri Lanka and a wind power plant of 3 MW was commissioned as a pilot project in Hambantota recently. Wind energy, however, is available only in limited areas and the cost of installation is high. Given present technology, solar energy is expensive for large-scale electricity generation but could be economical in remote areas, where extending the national grid is expensive. Application of other forms of renewable energy sources such as geo-thermal energy, bio-mass, wave energy and sawdust, are at demonstration stage. They could play an important role in decentralisation of electricity generation to meet electricity needs of rural and remote areas.

Among the several options, coal power is most economically viable, cost effective and stable in supply. Environmental consequences are at internationally accepted norms.

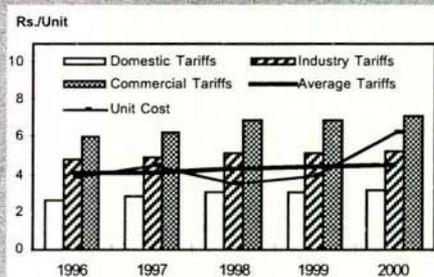


**Chart 5.3**  
**Major Energy Sources**

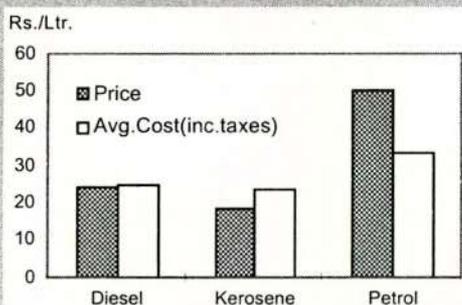
**Chart 5.3.1**  
**Electricity Generation and Sales**  
(1990=100)



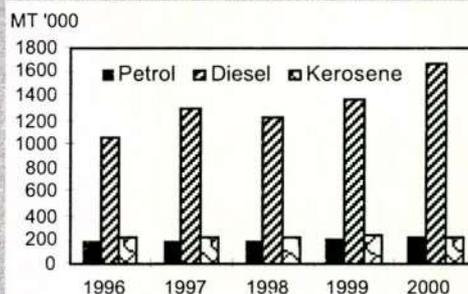
**Chart 5.3.2**  
**Electricity: Average Tariffs and Costs**



**Chart 5.3.3**  
**Petroleum: Prices at end 2000 and Average Costs**



**Chart 5.3.4**  
**Petroleum Products: Domestic Sales**



MW), the Kelanitissa combined cycle power project (165 MW), rural electrification projects and power transmission improvement projects. The Kukule Ganga hydropower project is expected to be completed by May 2003. The total cost of the project has been estimated at about Rs.18 billion. The construction work of CEB's combined cycle power project (165 MW) was in progress and the first phase of the project with a capacity of 110 MW, is scheduled to be commissioned in October 2001. The ADB funded Rural Electrification Project III, which commenced in 1996 to provide electricity to about 150,000 rural consumers at an estimated cost of Rs.3,200 million, was extended till mid 2001 with an additional sum of Rs.619 million. The suspension of the proposed West Coast coal power plant is a serious setback to the development of the power sector as far as much needed low cost capacity

expansion is concerned. According to CEB's power generation plan, a 300 MW coal power plant is expected to be commissioned in 2004 to meet the growing demand for electricity. Delays in the construction of planned power plants will result in severe shortages of power in the future. Temporary measures taken to avert such power shortages would increase the cost of power, adversely affecting industrialists who require low cost power to maintain their competitiveness. It is important to note that the lead-time for a power project runs to about 4 - 5 years and therefore, action delayed today will mean a severe power crisis in the country in the future. It is therefore necessary that all parties with conflicting interests resolve their differences and reach a settlement quickly to ensure future sustainability of the economy.

Private sector participation in the power sector continued to expand during 2000. The 60 MW barge mounted power plant by Colombo Power (Pvt) Ltd. was commissioned in June 2000. An 8 MW diesel power plant was established by Kool Air (Pvt) Ltd. at Kankasanturai in 2000. The construction of a combined cycle power plant (163 MW) by Kelanitissa Power (Pvt) Ltd. was in progress. The initial work has been completed to construct two diesel power plants of 20 MW each at Anuradhapura and Matara by a consortium of investors led by a local company. In addition, there were 8 small hydropower projects with a capacity of 17.5 MW under various stages of construction. CEB has issued Letters of Intent (LOI) in respect of a further 49 small power projects with a combined capacity of 147 MW. As private sector participation in the power sector has grown substantially during the past few years, it is necessary to establish a regulatory authority to look after the interests of investors as well as consumers.

A power sector reform office has been set up to draw up plans to review CEB's functions. Under the proposed reforms, an unbundling of the main functions of the CEB, i.e., power generation, transmission and distribution, and the creation of separate entities to manage these functions, have been envisaged.

## Petroleum

The importance of petroleum as a source of commercial energy has come to prominence recently, with the expansion of the demand that has arisen, particularly in the transportation and thermal power sectors. In 2000, the demand for major petroleum products increased by 14 per cent following a 9 per cent increase in the previous year. Crude oil imports rose by 29 per cent to 2,349 mt as the petroleum refinery of the CPC operated throughout the year, in contrast to its closure for several weeks in 1999 for routine maintenance. Hence, the import of refined product increased only marginally in 2000.

The average crude oil import price (c&f) rose to US\$ 28.30 in 2000 from US\$ 18.91 in the previous year. This is the highest average import price since 1980. Oil prices started to rise in world markets as the Organisation of the Petroleum Exporting Countries (OPEC) decided to cut oil supplies by 2.1 million barrels per day with effect from April 1999. Subsequent increases in oil production had little impact on the market due to the growing world demand caused by expanding economies, particularly in North America and East Asia. The average import price, which was around US dollars 25 a barrel in January 2000, rose to around US dollars 33 a barrel by October 2000. The total expenditure on petroleum imports more than doubled to US dollars 901 million, accounting for about 12 per cent of the country's total import bill. Although local prices of petroleum products were revised on four occasions in 2000,

the revisions were made after considerable delays and were less than required, because of the concern about their impact, particularly on the cost of living. In comparison to prices in the previous year, diesel, kerosene and furnace oil prices were increased by 86 per cent, 77 per cent and about 100 per cent, respectively in 2000. However, the price of petrol, which was priced significantly above cost, was not revised with a view to rationalising the prevailing anomalous price structure. CPC operations in 2000 resulted in a large loss of approximately Rs.15 billion, which compelled it to depend heavily on bank credit to meet its financial obligations. This had an adverse impact on financial markets, exerting upward pressure on market interest rates. These problems emphasise the need for a flexible pricing system for petroleum products, which would lead to the adjustment of local prices in line with price movements in international markets. The sharp increase in oil import expenditure exerted severe pressure on the balance of payments and foreign exchange reserves of the country.

Despite substantial increases in local prices, the demand for petroleum products rose by about 14 per cent in 2000. The consumption of auto diesel expanded significantly by 22 per cent in 2000, compared with 13 per cent in the previous year. The use of diesel for thermal power generation, which accounts for about 25 per cent of the total diesel sales, rose by 125 per cent. Auto diesel sales to the transport sector recorded a lower growth of 5 per cent in 2000, compared to the 12 per cent increase in the previous year. Meanwhile, petrol sales increased by 5 per cent, following a 4 per cent rise in 1999. Kerosene sales dropped by 6 per cent in 2000. The consumption of furnace oil rose by 9 per cent, mainly due to the high demand for thermal power generation and increased demand from the industrial sector.

Local sales of liquefied petroleum gas (LP gas) have shown a steady growth in recent years, as it is increasingly used for cooking purposes and for running petrol vehicles after conversion to LP gas. The latter was increased by the substantial price differences between petrol and LP gas. According to the Consumer Finances and Socio-economic Survey 1996/97 of the Central Bank, the proportion of households using LP gas for cooking purposes had increased to 10.8 per cent by 1997 from 2.6 per cent a decade ago. However, the growth rate of LP gas consumption decelerated significantly in 2000. This was a result of a nearly zero growth in the domestic sector, due perhaps to the price increase of 58 per cent during the year, and a relatively slower growth of 9 per cent in the industrial sector. Meanwhile, LP gas consumption in the auto gas sector increased sharply by 33 per cent. In 2000, Shell Gas Lanka Ltd (SGL) imported 133,598 mt and purchased 16,104 mt of LP gas from CPC to meet the local demand. Meanwhile, the monopoly status enjoyed by SGL expired on 08 December 2000, paving the way for greater competition in the supply of LP gas to the domestic market.

**TABLE 5.7**  
**Performance of the Petroleum Sector**

| Item                                 | Unit        | 1998   | 1999   | 2000(a) | Percentage Change |         |
|--------------------------------------|-------------|--------|--------|---------|-------------------|---------|
|                                      |             |        |        |         | 1999              | 2000(a) |
| Quantity imported                    |             |        |        |         |                   |         |
| Crude oil                            | Mt '000     | 2,141  | 1,826  | 2,349   | -15               | 29      |
| Refined products                     | "           | 773    | 1,303  | 1,906   | 69                | 0       |
| L.P. gas                             | "           | 99     | 127    | 134     | 28                | 6       |
| Value of imports (c&f)               |             |        |        |         |                   |         |
| Crude oil                            | Rs. mn.     | 13,990 | 18,222 | 37,697  | 30                | 107     |
|                                      | US\$ mn.    | 217    | 259    | 497     | 19                | 92      |
| Refined products                     | Rs. mn.     | 6,223  | 9,964  | 25,318  | 60                | 154     |
|                                      | US\$ mn.    | 96     | 142    | 334     | 48                | 135     |
| L.P. gas                             | Rs. mn.     | 1,487  | 2,505  | 4,172   | 68                | 67      |
|                                      | US\$ mn.    | 23     | 36     | 55      | 57                | 53      |
| Average price of crude oil (c&f) (b) | Rs./barrel  | 871    | 1,353  | 2,167   | 55                | 61      |
|                                      | US\$/barrel | 13.47  | 18.91  | 29.39   | 40                | 56      |
| Quantity of exports                  | mt '000     | 237    | 204    | 224     | -14               | 10      |
| Value of exports                     | Rs. mn.     | 2,615  | 3,017  | 5,944   | 15                | 77      |
|                                      | US\$ mn.    | 40     | 43     | 71      | 8                 | 65      |
| Local sales                          | mt '000     | 2,638  | 2,835  | 3,222   | 7                 | 15      |
| Super petrol                         | "           | 204    | 213    | 224     | 4                 | 15      |
| Auto diesel                          | "           | 1,224  | 1,377  | 1,684   | 13                | 22      |
| Super diesel                         | "           | 38     | 40     | 46      | 4                 | 15      |
| Kerosene                             | "           | 236    | 243    | 228     | 3                 | 6       |
| Furnace oil                          | "           | 706    | 676    | 737     | -4                | 9       |
| Avtur                                | "           | 113    | 143    | 157     | 26                | 10      |
| L.P. gas                             | "           | 117    | 140    | 146     | 20                | 4       |
| Local price                          |             |        |        |         |                   |         |
| Super petrol                         | Rs./litre   | 50.00  | 50.00  | 50.00   | 0                 | 0       |
| Unleaded petrol                      | "           | 55.00  | 53.00  | 53.00   | -4                | 0       |
| Auto diesel                          | "           | 13.20  | 13.20  | 24.50   | 0                 | 86      |
| Super diesel                         | "           | 18.50  | 18.50  | 29.80   | 0                 | 61      |
| Kerosene                             | "           | 10.40  | 10.40  | 18.40   | 0                 | 77      |
| Furnace oil                          | "           |        |        |         |                   |         |
| 500 Seconds                          | "           | 7.80   | 7.80   | 15.90   | 0                 | 104     |
| 800 Seconds                          | "           | 7.50   | 7.50   | 15.10   | 0                 | 101     |
| 1,000 Seconds                        | "           | 7.20   | 7.20   | 14.60   | 0                 | 103     |
| L.P. Gas                             | Rs./kg.     | 23.85  | 25.77  | 40.72   | 8                 | 58      |

(a) Provisional

(b) As reported by Ceylon Petroleum Corporation

Sources: Ceylon Petroleum Corporation  
Shell Gas Lanka Ltd.

## 5.6 Transportation

### Roads

The main responsibility for the development and maintenance of the road network of about 100,000 km is vested with government institutions at various levels. The national highway network, consisting of 11,486 km of A and B class roads and 4,480 bridges comes under the direct purview of the central government. The executing agency for developing and maintaining these roads is the Road Development Authority (RDA). The functions of the RDA include planning, designing and constructing new highways and bridges, in addition to maintaining and carrying out improvements to the existing national highway network. Provincial councils maintain about 15,000 km of C and D class roads, while minor roads are maintained by local authorities and some other public institutions.

Total expenditure on the maintenance and improvement of the existing national highways and bridges managed by RDA in 2000 amounted to Rs.4,428 million, which was 20

per cent less than in the previous year. Of the total expenditure, about 94 per cent was incurred on rehabilitation, widening and construction of roads and the balance on the general maintenance of roads and bridges.

RDA continued the implementation of several road projects to upgrade the national road network during 2000. The Third World Bank Road Rehabilitation Project, which commenced in 1996 to rehabilitate 397 km of roads and reconstruct 19 bridges, was nearing completion by end 2000. The Third Road Rehabilitation and Improvement Project was funded by ADB. Widening of the Peradeniya - Gampola road (14 km.) and re-surfacing of the Narammala - Giriulla (16 km) road were completed under this project during the year. In addition, work on Phase I of the Katunayake - Kiriyanakalliya road (75 km), which commenced in 1997, was completed in 2000 at a cost of Rs.1,022 million. Phase II of this project, from Kiriyanakalliya to Puttalam (30 km), was in progress. The estimated cost of Phase II is Rs.1,661 million.

The construction work of Stage I of the Baseline Road Improvement and Extension Project, funded by JBIC had been almost completed by end 2000. This included the construction of a flyover at Dematagoda and a pedestrian underpass at Borella. Meanwhile, Phase II of the Sri Lanka - Japan Friendship Bridge Project, funded by JBIC, was completed in 2000 at a cost of Rs.958 million. With assistance from the Kuwait Fund for Arab Economic Development, the reconstruction of 10 bridges was also completed in 2000, at a cost of Rs.151 million. The Ratnapura-Bandarawela Road Rehabilitation Project commenced in 2000 with financial assistance from the Economic Development Co-operation Fund (EDCF) of Korea.

RDA implemented several construction and rehabilitation projects with local funds as well. During 2000, Rs.4,205 million was allocated for these projects and most of the work was nearing completion by end 2000. In addition, the construction of a Marine Drive along the Western coastal railway line and the Duplication Road Extension Project, was in progress during the year. Land acquisition for these two road projects was completed and the estimated total costs were Rs.204 million and Rs.103 million, respectively.

Preliminary work on the proposed Southern highway (Colombo - Matara Highway) was in progress in 2000. The highway has two sections, to be financed separately by ADB and JBIC. The Nordic Fund is financing the management consultancy work for the entire Southern Highway Project. A resettlement implementation plan for affected parties was under preparation during 2000.

In respect of the Colombo - Kandy expressway, the pre-feasibility study has commenced and is expected to be completed in early 2001 with financial assistance from SIDA. The contract for the Colombo - Katunayake expressway from the new Kelani bridge to the Katunayake airport was awarded as a design and build arrangement and construction work commenced in 2000. The proposed Outer Circular highway, a new road linking all major roads radiating from Colombo, is awaiting environmental clearance.

Although, Sri Lanka has a dense network of roads, a large part of it remains below standard, and is unable to support the increasing demand for fast and comfortable travel. Major investment expenditure for the road sector, in the past few decades, has been on maintenance, rehabilitation and reconstruction of existing roads and not on the construction of new trunk roads. As road capacities have not expanded in line with the growth of the vehicle population, congestion on roads has grown rapidly in urban centres. The poor quality of roads has contributed to increased incidence of accidents, and substantial economic and social costs. The construction of the proposed highways

and expressways would help reduce these problems to a certain extent. However, along with the addition of new trunk roads, effective traffic management systems, vehicle-parking systems in major cities, improvement of pedestrian ways, a regulatory and legal framework with effective enforcement and awareness programmes are needed to improve the flow of traffic on the existing roads.

### Passenger Transport

The passenger transport sector showed a modest improvement in 2000 with moderate expansion in the bus fleet and the number of trains operated. The sharp rise in diesel prices and other operating expenses during 2000 initially had an adverse impact on passenger transportation. However, the revision of bus fares by over 50 per cent since September 1999 in three steps more than compensated for these increases. The Regional Transport Companies (RTCs) increased their bus fleets during the year, increasing the operated kilometerage. The rolling stock of Sri Lanka Railways (SLR) was also modernised with the purchase of 15 new power sets. However, as rail fares were not revised, the increase in diesel prices and other operating expenses had an adverse impact on SLR, which led to a further increase in its losses.

### Bus Transport

With the intention of increasing the public sector share in the passenger transport sector to about 60 per cent, from the present 40 per cent, RTCs continued to expand their fleets and operations. The bus fleet of RTCs, the average number of buses operated per day and the operated kilometerage all increased. As a result, the share of RTCs in the passenger transport sector, in terms of operated kilometres, increased from 39 per cent in 1999 to 43 per cent in 2000. These developments, together with the upward revision of bus fares, helped RTCs to improve their financial position and reduce losses in 2000. Bus fares were raised on two occasions in 2000, in February and in June, by 15 per cent each. The full impact of the passenger fare increase in September 1999 by 15 per cent was also experienced in 2000. In addition, revenue leakage was reduced by establishing a more efficient ticket checking system, which helped improve the revenue of RTCs. Total revenue of RTCs rose significantly by 30 per cent, while operating expenditure increased by 20 per cent. Consequently, the loss of RTCs in 2000 dropped by 11 per cent. The total revenue of RTCs included a sum of Rs. 575 million received from the Treasury to compensate for losses from operating bus services on uneconomic routes. The total number of employees in all RTCs increased by 1,895 to 38,125 during the year. However, the average number of employees per bus declined to 7 in 2000 from 8 in 1999, as the number of buses operated per day increased in 2000.

The National Transport Commission (NTC) prepared separate business plans for 11 RTCs and a consolidated

**TABLE 5.8**  
**Salient Features of the Transport Sector**

| Item                                      | Unit        | 1998    | 1999    | 2000(a) | Percentage Change |         |
|---|-------------|---------|---------|---------|-------------------|---------|
|   |             |         |         |         | 1999              | 2000(a) |
| <b>New registration of motor vehicles</b> | <b>nos.</b> | 103,760 | 102,853 | 91,929  | -0.9              | -10.6   |
| Buses                                     | "           | 3,184   | 2,118   | 1,852   | -33.5             | -12.6   |
| Private coaches                           | "           | 164     | 493     | 446     | 200.6             | -9.5    |
| Private cars                              | "           | 6,142   | 10,532  | 13,848  | 71.5              | 31.5    |
| Three wheelers                            | "           | 16,547  | 14,706  | 11,656  | -11.1             | -20.7   |
| Dual purpose vehicles                     | "           | 18,455  | 9,818   | 7,928   | -46.8             | -19.3   |
| Motor cycles                              | "           | 42,089  | 42,497  | 39,987  | 1.0               | -5.9    |
| Goods transport vehicles                  | "           | 8,702   | 13,361  | 8,585   | 53.5              | -35.7   |
| Land vehicles                             | "           | 8,415   | 9,290   | 7,530   | 10.4              | -18.9   |
| Others                                    | "           | 62      | 38      | 97      | -38.7             | 155.3   |
| <b>Sri Lanka Railways (S L R)</b>         |             |         |         |         |                   |         |
| Operated kilometers                       | '000        | 8,534   | 8,900   | 9,565   | 4.3               | -3.5    |
| Passenger kilometers                      | mn.         | 3,073   | 3,104   | 3,208   | 1.0               | 3.4     |
| Freight ton kilometers                    | mn.         | 105     | 103     | 88      | -1.9              | -14.6   |
| Total revenue                             | Rs.mn.      | 1,190   | 1,038   | 1,015   | -12.8             | -2.2    |
| Current expenditure                       | "           | 2,038   | 2,585   | 2,696   | 26.8              | 3.9     |
| Operating loss                            | "           | 847     | 1,546   | 1,671   | 82.5              | 8.1     |
| Capital expenditure                       | "           | 3,997   | 2,140   | 5,040   | -46.5             | 135.5   |
| <b>Regional Bus Companies</b>             |             |         |         |         |                   |         |
| Operated kilometers                       | mn.         | 322     | 344     | 384     | 6.8               | 11.6    |
| Passenger kilometers                      | "           | 17,749  | 17,956  | 18,675  | 1.2               | -4.0    |
| Total revenue                             | Rs.mn.      | 4,808   | 5,289   | 6,873   | 10.0              | 29.9    |
| Operational expenditure                   | "           | 6,381   | 7,038   | 8,429   | 10.3              | 19.8    |
| Operating loss                            | "           | 1,574   | 1,749   | 1,556   | 11.1              | -11.0   |
| <b>SriLankan Airlines</b>                 |             |         |         |         |                   |         |
| Hours flown                               | hrs.        | 32,895  | 35,970  | 48,405  | 9.3               | 34.6    |
| Passenger kilometers flown                | mn.         | 4,155   | 5,185   | 6,860   | 24.8              | 32.3    |
| Passenger load factor                     | %           | 70      | 71      | 67      | 1.4               | -5.9    |
| Weight load factor                        | %           | 61      | 57      | 56      | -5.9              | -1.6    |
| Freight                                   | mt. '000    | 34      | 57      | 115     | 67.6              | 101.8   |
| Employment                                | no.         | 4,822   | 4,955   | 5,206   | 2.8               | 5.1     |

(a) Provisional

Sources: Department of Motor Traffic  
Sri Lanka Railways  
National Transport Commission  
Department of Civil Aviation  
SriLankan Airlines

plan for all RTCs with a view to improving their operational efficiency. The government was considering further consolidation of RTCs for greater co-ordination of bus services. One of the major problems faced by RTCs in further improving their services is the inadequate bus fleet. According to the estimates of RTCs, they need to operate at least 6,590 buses per day to provide a satisfactory service, i.e., about 1,000 more buses, requiring an investment of at least Rs.2,000 million.

The scale of operations of private bus services underwent a slight setback in 2000. The registration of new buses at the Department of Motor Traffic by private bus operators dropped by 34 per cent to 834 in 2000. As reported by the Provincial Authorities of Road Passenger Transport (PARPT), there were 12,439 private buses in operation at the provincial level, excluding the Northern and Eastern provinces, at end 2000. This indicates a decrease of the number of buses operated by about 6 per cent over 1999. Total seating capacity in these buses increased by 7 per cent to 428,254 reflecting the deployment of larger

buses. The number of new permits issued by provincial councils for intra provincial transport dropped by 25 per cent to 1,385. During the year, the Western Province PARPT introduced school bus services operated by the private sector to reach leading schools in Colombo, Kalutara and Gampaha.

The government allowed passenger fare increases on three occasions between September 1999 and January 2001, by 15 per cent each, taking into account the increases in diesel price and the cost of spare parts. These fare increases more than off-set the actual increase in the cost of diesel and spare parts, thereby improving the profitability of investment in passenger transportation. In accordance with the National Transport Act No.30 of 1996, the formation of private bus companies with a minimum of 50 buses commenced in 2000. By end 2000, there were 10 such companies formed in 7 districts.

The private bus operators, though they provide a greater part of the services, are still faced with a number

of problems which need to be resolved early if they are to improve the standards of their services. Non-availability of bus stations and parking space, lack of co-ordination between the private and public bus operations for allocation of routes and time schedules, poor road conditions, untrained crews and revenue leakage are the main problems.

### Rail Transportation

As the rolling stock of Sri Lanka Railways (SLR) was strengthened by the addition of 15 new power sets towards the end of 2000, the quality of services would improve in the future. The passenger kilometrage of SLR increased by 3 per cent, but the operated kilometrage fell by 4 per cent as the new power sets were put into operation only towards end of 2000. The freight ton kilometrage also decreased by 14 per cent. This declining trend in freight transportation has been experienced since 1992, except in 1998, as the alternative road haulage has been preferred by goods transporters on account of its greater flexibility, reliability and convenience.

Late arrival at destinations, over crowded compartments and a low degree of safety and comfort are some of the persistent problems faced by an average train traveller. SLR on its part has made efforts to tackle them within the availability of its limited resources, out-dated rolling stock, weak rail tracks and outdated signalling system. The addition of 15 power sets in 2000 relieved the situation to some extent. Towards the end of 2000, SLR introduced 25 additional train services; 6 trains on the main line, 6 trains on the coastal line, 4 trains on the Kelani Valley line, 5 trains on the Puttalam line and 4 trains on the Northern line. During 2000, train cancellations were reduced by 32 per cent, while derailments of trains on running lines were reduced by 14 per cent.

Several projects to improve rail infrastructure were implemented in 2000. The rehabilitation of rail track with new rails and sleepers continued during the year. The construction of a double line from Panadura to Wadduwa was completed. This will reduce delays on the coastal line. Rehabilitation work on the Kelani Valley line was completed up to Pannipitiya. Construction work on a double line from Ragama to Negombo also commenced. Several steps were taken to upgrade the signalling and protection system. The signal system for the double line between Panadura and Wadduwa was completed, while preliminary work on the Ragama - Kandana double line signalling system was also completed.

The overall financial position of SLR further deteriorated during the year, as rail fares remained unchanged, while operating expenditure rose rapidly. The total revenue of SLR decreased marginally to Rs.1,014 million mainly due to a drop in earnings from goods transportation by 34 per cent. Revenue from passenger fares, however, increased from Rs. 679 million in 1999 to

Rs.741 million in 2000 due to an increase in passenger kilometrage. An increase in the demand for rail passenger transport was observed towards the end of 2000, partly due to higher cost of road transport resulting from the substantial increase in the prices of petroleum products. The current expenditure of SLR rose by 4 per cent to Rs. 2,686 million during the year. Accordingly, the operating loss of the SLR increased by 8 per cent to Rs.1,671 million in 2000.

### Civil Aviation

The civil aviation sector, which includes air passenger transportation by the national carrier and foreign airlines and related infrastructure development, further expanded during the year. The re-fleeting programme of SriLankan Airline (SLA) was completed in 2000, with the purchase of three more Airbuses during the year. As a result, the scale of operations of SLA, in terms of number of passengers, kilometres flown and passenger kilometrage expanded substantially during the year, although its financial position deteriorated, owing to a sharp rise in operating expenditure.

In addition to SLA, there were 27 foreign airlines servicing Sri Lanka at end 2000. Despite the slowdown of tourist arrivals, the total number of passengers who passed through the Bandaranaike International Airport (BIA) in 2000 increased by 12 per cent to 2.9 million. Of the total, about 63 per cent or 1,822,810 passengers travelled by SLA. The total freight handled at BIA amounted to 211,930 metric tons, reflecting a significant increase of 42 per cent over 1999.

The kilometrage flown by SLA increased by 7 per cent, while the passenger kilometrage increased by 32 per cent. However, the passenger load factor (the ratio of actual revenue to potential revenue) declined to 67 in 2000 from 71 in 1999, owing to higher seating capacity in the new aircraft. The total revenue of SLA increased by 34 per cent to Rs. 27,141 million in 2000, mainly due to increased passenger kilometers and freight handling. However, the operating expenditure increased by 58 per cent to Rs.32,056 million, partly as a result of the steep rise in fuel prices. The fuel expenditure of SLA increased from Rs.2,532 million to Rs.4,778 million between the financial years 1998/99 and 1999/2000. Consequently, SLA recorded an operating loss of Rs. 786 million during the year.

The year 2000 was the third year of a ten-year business plan being implemented by the managing partner of SLA, Emirates Airlines (EAL). The plan focuses on fleet renewal, schedule expansion, product enhancement, improvement of information technology systems and human resource development. Meanwhile, the old fleet of Tri-Star aircraft was sold. Under the fleet renewal programme, three new Airbuses were added in 2000, in addition to three

Airbuses added in 1999. Along with the fleet expansion, the cadre of pilots was increased from 175 in 1999 to 250 in 2000. The class system was also reconfigured into two classes, business and economy, instead of the previous three classes, to match the interior layout of the new aircraft. Meanwhile, SLA launched services to four new destinations viz., Dhaka, Milan, Berlin and Munich, during the year.

### Port Services

With the long-term objective of developing the Port of Colombo as the shipping centre and hub port in the region, the main focus of the port sector in recent years has been on the expansion of port infrastructure and improvement of port efficiency. The development of the regional ports of Sri Lanka has also been given due consideration in the national port policy. Cargo handling at the Port of Colombo had shown steady growth between 1980-1997, since the containerisation of the port in the early 1980s and the growth in transshipment handling. By 1997, the Port of

Colombo was operating at its designed capacity prompting the need for further expansion of its cargo handling capacity. However, since 1998, transshipment handling has been sluggish, mainly due to the expansion in other regional ports and the opening of new ports in other countries in the region. The setback is considered to be temporary. The immediate challenge faced by the port sector is to attract more transshipment cargo to Sri Lankan ports by offering an efficient service to shipping lines. Efficiency improvement in cargo handling, and the provision of other ancillary services, along with an effective marketing strategy, are the measures to be taken by the port authorities to raise the status of the Port of Colombo to a leading port in the region.

In 2000, the total number of ships that arrived at the Colombo, Galle and Trincomalee ports dropped by 2 per cent, mainly due to a decline in the arrival of conventional ships. The number of container ships arriving at the Port of Colombo, however, increased by 3 per cent. Meanwhile,

**TABLE 5.9**  
**Performance of the Port Services**

| Item  | 1998   | 1999   | 2000(a) | Percentage Change |         |
|---|--------|--------|---------|-------------------|---------|
|   |        |        |         | 1999              | 2000(a) |
| 1 Vessels arrived (No.)                       | 4,233  | 4,339  | 4,232   | 3                 | 2       |
| Colombo                                       | 3,879  | 3,968  | 3,832   | 2                 | 3       |
| Galle   | 104    | 97     | 97      | -7                | 0       |
| Trincomalee                                   | 250    | 274    | 303     | 10                | 11      |
| 2 Total cargo handled (MT '000)               | 26,847 | 26,995 | 27,535  | 1                 | 2       |
| Colombo                                       | 24,793 | 24,825 | 25,222  | 0                 | 2       |
| Galle   | 402    | 439    | 597     | 9                 | 36      |
| Trincomalee                                   | 1,652  | 1,731  | 1,716   | 5                 | -1      |
| 3 Total container traffic (TEUs '000)         | 1,714  | 1,704  | 1,733   | -1                | 2       |
| SLPA  | -      | 1,636  | 1,452   | -                 | -       |
| SAGT (b)                                      | -      | 68     | 301     | -                 | -       |
| 4 Transshipment container (TEUs '000)         | 1,235  | 1,153  | 1,130   | -7                | -2      |
| SLPA  | -      | 1,108  | 913     | -                 | -       |
| SAGT (b)                                      | -      | 45     | 217     | -                 | -       |
| 5 Revenue (Rs. mn.) (c)                       | 13,638 | 15,089 | 14,717  | 11                | 2       |
| Colombo                                       | 13,221 | 14,552 | 14,079  | 10                | 3       |
| Galle   | 218    | 225    | 320     | 3                 | 42      |
| Trincomalee                                   | 199    | 311    | 318     | 56                | 2       |
| 6 Expenditure (Rs. mn.) (c)                   | 8,590  | 9,765  | 10,744  | 14                | 10      |
| Colombo                                       | 8,163  | 9,316  | 10,272  | 14                | 10      |
| Galle   | 186    | 190    | 208     | 2                 | 9       |
| Trincomalee                                   | 241    | 259    | 264     | 7                 | 2       |
| 7 Operating profit - before tax (Rs. mn.) (c) | 5,048  | 5,323  | 3,973   | 5                 | -26     |
| Colombo                                       | 5,059  | 5,236  | 3,807   | 3                 | -27     |
| Galle   | 32     | 35     | 112     | 9                 | 220     |
| Trincomalee                                   | -42    | 52     | 54      | -224              | 4       |
| 8 Employment (no.) (c)                        | 18,777 | 18,930 | 19,344  | 1                 | 2       |
| Colombo                                       | 16,964 | 17,075 | 17,411  | 1                 | 2       |
| Galle   | 769    | 777    | 758     | 1                 | -2      |
| Trincomalee                                   | 1,044  | 1,078  | 1,175   | 3                 | 9       |
| 9 Productivity indicators (main vessels) (c)  |        |        |         |                   |         |
| Gantry moves per hour (gross)                 | 12     | 15     | 15      | 25                | 0       |
| Gantry moves per hour (net)                   | 17     | 17     | 17      | 0                 | 0       |

(a) Provisional

(b) SAGT Commenced cargo handling at the QEQ w.e.f. 5 September 1999.

(c) Only for Sri Lanka Ports Authority

TEUs = Twenty-foot equivalent container units

Source: Sri Lanka Ports Authority

the total cargo handled at all three ports increased. The bulk of this was handled at the Port of Colombo. Of the total cargo handled at the Port of Colombo, about 72 per cent was containerised cargo. The total container throughput at the Port of Colombo (including SAGT) rose by 2 per cent, the outcome of an 8 per cent increase in domestic container handling (imports and exports) and 2 per cent drop in transshipment handling. Transshipment, the mainstay of the Port of Colombo, constituted about 65 per cent of the total container throughput. The decline of transshipment handling was mainly due to the diversion of some transshipment cargo from Colombo to other ports in the region.

The Queen Elizabeth Quay (QE) was privatised in September 1999. South Asia Gateway Terminals Ltd. (SAGT), the developers of QE, also handled cargo, while rehabilitating the quay. SAGT intends to open two berths by mid 2001, after rehabilitation. The performance of SAGT showed substantial improvements despite the fact that the SAGT was operating with limited capacity and with less than 400 employees. Container handling at the QE in 1999 was 200,147 TEUs. However in 2000, under SAGT management, it increased by 68 per cent to 300,591 TEUs. In comparison, container handling at terminals belonging to SLPA (the Jaye Container Terminal (JCT), the Unity Container Terminal (UCT) and other quays) dropped by 12 per cent to 1,432,264 TEUs. With new berths, SAGT will be in a better position to attract more shipping lines by offering an efficient service. Therefore, it is important that the SLPA pays serious attention to improving the efficiency and productivity at its own terminals, in order to be competitive, not only with ports in the region but also with its neighbour terminal, SAGT.

During 2000, no significant improvement in port productivity or efficiency of cargo handling was seen at the terminals managed by SLPA. The gantry productivity (number of containers handled per hour) remained unchanged at 15 moves (gross) and 17 moves (net) per hour in respect of main line vessels. However, berth productivity improved slightly with net gantry moves per hour increasing from 32 to 35 per hour for main line vessels. Berth efficiency also showed marginal improvement, where the average delay in berthing of a main line container vessel decreased from 3.7 hours to 2.5 hours and the average berth stay decreased from 16.2 hours to 15.9 hours.

Port productivity, in terms of TEUs per employee, dropped significantly during the past few years mainly due to a substantial increase in the workforce of the SLPA. The number of employees of the SLPA has increased to about 19,300 in 2000 from 18,930 in 1999. Container handling per employee dropped to 74 in 2000 from 86 in 1999. This is partly due to the loss of container handling by about 20 per cent, due to the handing over of QE operations to SAGT. The transfer of QE operations was not associated

with a corresponding transfer of employees to SAGT or the retrenchment of the now redundant employees. Despite this, SLPA recruited additional employees in 2000. It is important to note that SAGT handled about 20 per cent of the total TEUs of the Port of Colombo in 2000 with less than 400 employees. The assessment of the actual labour requirements and the rationalisation of the existing labour force in line with the needs are therefore essential in improving labour productivity of SLPA.

SLPA implemented several capital projects with a view to expanding port capacity and improving efficiency of cargo handling. The construction work of Phase II of the North Pier Development Project commenced in June 2000. The estimated cost of the project is Rs.3,056 million and financial assistance has been given by JBIC. On completion in 2002, the North Pier will have the capacity to handle 230,000 TEUs per annum. With the objective of improving the feeder container handling efficiency in the Port of Colombo, an additional feeder berth was under construction in 2000, at an estimated cost of Rs.726 million. Meanwhile, the government took a decision to develop the Port of Galle as a regional port. In this respect, a feasibility study is in progress and funding for the development is expected from JBIC. In order to meet the immediate needs of the Southern region, the construction of a jetty at the Galle Port to berth bulk cargo vessels was in progress. The estimated cost of the project is Rs.600 million and the project is scheduled to be completed by mid 2001. A new pier was also being constructed at the Trincomalee Port to berth 40,000 dead weight ton bulk cargo vessels. The total estimated cost of the project is Rs.1,250 million and the project is expected to be completed in early 2002. A feasibility study to develop the new Colombo South harbour was also underway with financial assistance from ADB. The final report of the feasibility study is expected in early 2001.

The total revenue of SLPA decreased by about 2 per cent in 2000, after an 11 per cent increase in the previous year. The main reason for the drop in revenue is the decline in container handling by SLPA. Port charges for container handling remained unchanged during the year. The total operating expenditure of the SLPA rose by 10 per cent. Accordingly, the operating profit of SLPA dropped by 25 per cent to Rs.3,973 million in 2000.

## 5.7 Irrigation and Settlement Schemes

Expenditure incurred by the Irrigation Department on 22 locally funded projects during the year amounted to Rs.502 million. The 'Mau Ara' Project benefiting the Monaragala and Hambantota districts accounted for 48 per cent of this expenditure.

Three major foreign funded projects, viz. The National Irrigation Rehabilitation Project (NIRP), the Hambantota Irrigation Rehabilitation Project (HIRP) and the Welis Oya

Diversion project progressed further in 2000. During the year, a sum of Rs.75 million was spent on NIRP, which is jointly funded by the International Development Association (IDA) and the European Economic Community (EEC). Meanwhile, the expenditure incurred under HIRP with funds from Kuwait amounted to Rs.49 million, while the expenditure under the Welu Oya Diversion Project, with Japanese funding, amounted to Rs.37 million.

In the Mahaweli scheme, several families were settled during the year under a special selection programme. After a lapse of six years, over 400 families were settled in System 'H'. A total of over 4,000 families were settled under different systems during the year.

## 5.8 Special Programmes

### Housing

Several housing programmes are being implemented by both the public and the private sectors to provide reasonable housing facilities for all. The government, while encouraging private sector investment in housing by way of granting attractive fiscal incentives, provides direct assistance to low income families to build or upgrade their houses. The demand for housing, especially in the urban sector, is growing rapidly due to population expansion. Private sector housing providers focus mainly on the urban sector housing market, while the public sector housing programmes focus mainly on improving rural and estate housing. Public sector housing is mainly for low-income families, while the private sector caters to middle and high-income categories. The construction of houses by owners themselves still forms a large part of housing construction in Sri Lanka.

The National Housing Development Authority (NHDA), Ministry of Fisheries and Aquatic Resources (MFAR), Plantation Housing and Social Welfare Trust (PHSWT), State Mortgage and Investment Bank (SMIB) and the Housing Development Finance Corporation (HDFC) are the major public sector institutions involved in the provision of housing. NHDA is responsible for the implementation of key state sector housing programmes, viz., the Janaudana Housing Programme (JHP), Scattered Rural Housing Programme (SRHP), Fisheries Housing Programme (FHP), Disaster Housing Programme (DHP), Scattered Urban Housing Programme (SUHP) and the Estate Housing Programme (EHP). The basic strategy of implementing these housing programmes is based on a self-help system where NHDA provides a maximum loan of Rs.50,000 to a beneficiary to build or upgrade his own house.

All these housing programmes indicated a slowdown in their performance in 2000 when compared with the previous year. According to NHDA, the main reason for the

slowdown was the greater attention paid by NHDA to the completion of a large number of housing schemes that commenced in the previous year. The total number of new housing units that commenced in 2000 dropped by 59 per cent to 32,199. The total number of housing units completed in 2000 decreased by 5 per cent to 38,900, while total disbursements dropped by 14 per cent to Rs.752 million over the previous year. This drop is mainly a reflection of the high base in 1999, in which year, a large number of housing units were completed. Under JHP, a total of 569 Janaudana villages with 32,656 housing units have been completed since 1995. In 2000, 9,513 housing units (7,549 units in the rural sector and 1,964 units in the urban sector) were completed under this programme. The total disbursements under the scheme amounted to Rs.201 million. The construction of housing units under SRHP increased by 16 per cent, in terms of the number of units completed, over the previous year. The construction of houses under FHP is now handled by the Ministry of Fisheries and Aquatic Resources and NHDA is responsible only for the on-going work. Under EHP, a sum of Rs.38 million was granted and 1,514 housing units were completed in 2000. NHDA launched a special housing programme for public servants in 2000, which is expected to be completed by end 2001, at a cost of Rs.400 million.

The average loan amount disbursed by NHDA amounted to Rs.25,000 per house with an interest rate of 10-16 per cent per annum and a repayment period of 5-15 years, depending on the loan amount. The major issue faced by NHDA is a financial constraint, mainly arising from the low rate of loan recovery. The recovery rate, however, improved slightly from 59 per cent in 1999 to 66 per cent in 2000, but is still below the level which would permit a sufficient reflow of resources to carry out its progress successfully.

PHSWT provides housing facilities to estate employees under the Plantation Development Support Programme (PDSP). PDSP has two components, viz., the new housing package and the upgrading package. Under the new housing package, a maximum amount of Rs.64,400 is granted to an estate sector employee to build a house. Under the upgrading package, a maximum amount of Rs.31,000 is granted per family. This programme is supported by the Plantation Reform Project funded by ADB. Under PDSP, a total of 1,603 new housing units were completed and 682 units were upgraded during 2000. Further, 7,133 new housing units and 507 upgraded units were under construction by end 2000. In addition, PDSP also provides water supply and sanitation facilities, health and welfare facilities and other supporting activities for existing settlements. The total expenditure under this programme was Rs.149 million in 2000.

TABLE 5.10  
Public Sector Housing Programme

| Sub Programme                    | Units Commenced (No.) |         | Units Completed (No.) |         | Disbursements (Rs.Mn.) |         |
|----------------------------------|-----------------------|---------|-----------------------|---------|------------------------|---------|
|                                  | 1999                  | 2000(a) | 1999                  | 2000(a) | 1999                   | 2000(a) |
| Janadana Programme               | 18,496                | 7,043   | 12,464                | 9,513   | 285                    | 201     |
| Rural Housing Programme          |                       |         |                       |         |                        |         |
| Scattered Loan & Grant Programme | 48,563                | 19,008  | 19,440                | 22,625  | 410                    | 413     |
| Urban Housing Programme          |                       |         |                       |         |                        |         |
| Scattered Loan & Grant Programme | 6,470                 | 3,423   | 4,619                 | 3,610   | 91                     | 63      |
| Estate Housing Programme         | 2,996                 | 1,670   | 1,230                 | 1,514   | 29                     | 39      |
| Direct Construction Programme    | 2,781                 | 474     | 1,396                 | 611     | 609                    | 614     |
| Disaster Housing Programme       | 2,314                 | 1,036   | 2,426                 | 1,346   | 56                     | 32      |
| Fisheries Housing Programme      | 42                    | 19      | 650                   | 292     | 6                      | 4       |
| Total                            | 81,662                | 32,673  | 42,225                | 39,511  | 1,486                  | 1,365   |

(a) Provisional

Source : National Housing Development Authority

The Ministry of Fisheries and Aquatic Resources Development continued the Diyawara Gammuna Housing Project that commenced in 1998 for the benefit of people in the fisheries sector. By end 2000, there were 73 housing schemes with 7,663 housing units at various stages of implementation. Of the total, 14 schemes with 2,677 housing units had been completed by end 2000. In addition, the Ministry commenced a new programme called the Diyawarapura programme, under which 3 Diyawarapura schemes with 338 housing units had been initiated by end 2000.

Construction work on the Sustainable Townships Programme (STP) designed for occupants in the under-served settlements in the Colombo City was in progress in 2000 under the direction of Real Estate Exchange Ltd. (REEL). About 40 per cent of the physical work to construct 687 housing units under the first phase of the Sahaspura project at Borella has been completed. The work is scheduled to be completed by August 2001. The cost of the first phase has been estimated at Rs.471 million. Construction work on the second phase of the Sahaspura project, with 650 housing units, also commenced during 2000 at Palangastuduwa in Borella. Meanwhile, four sites were identified for the second project under STP at 'Minikelanipura' in Totalanga. The second project will consist of 6,000 housing units and was expected to self-financing.

Housing construction undertaken by the private sector increased during 2000. According to the Greater Colombo Housing Approval Index (GCHAI) compiled by the Central Bank, housing approvals by local government authorities in the Greater Colombo area increased by 9 per cent to 10,490 during 2000. The Board of Investment (BOI) had approved 4 housing projects with an investment outlay of Rs.2,963 million in 2000. Commercial banks and other housing financing institutions such as the State Mortgage & Investment Bank (SMIB), National Savings Bank (NSB) and the Housing Development Finance Corporation of Sri

Lanka (HDFC) participated actively in granting housing loans for the construction of individual houses in recent years. In 2000, the number of housing loans granted by SMIB rose by 4 per cent to 10,419, although the value of loan disbursements dropped by 18 per cent to Rs.1,320 million. In addition to the existing housing loan schemes, SMIB introduced a new housing loan scheme for low-income groups with funds provided by the Employees' Trust Fund Board (ETFEB). The total number of loans granted by NSB increased by 18 per cent to 3,221, while the value of housing loans granted increased by 24 per cent to Rs.1,855 million. HDFC granted 3,826 housing loans in 2000 as against 4,179 in the previous year. The value of housing loans granted by HDFC rose by 7 per cent to Rs.559 million. Housing loans to members of the Employees' Provident Fund and loans to low income groups under the ADB loan scheme were the new housing loan programmes introduced by HDFC during 2000. The total number of housing loans granted by Bank of Ceylon increased by 16 per cent to 6,444 in 2000, while the value of housing loans granted increased by 43 per cent to Rs.935 million. People's Bank had granted 52,240 housing loans valued at Rs.3,910 million during 2000. Meanwhile, for the first time, a private sector company, solely involved in housing finance activities, was formed by NDB under the name of NDB Housing Finance Company Ltd. (NDB-HFC) and its commercial operations are expected to commence in early 2001. The Housing Development Finance Corporation of India, Asian Development Bank, Employees Provident Fund and the International Finance Corporation (IFC) are the strategic partners in NDB-HFC.

### Urban Development

The Urban Development Authority (UDA) has been vested with the responsibility for planned development of major urban centres in the country. Its functions include guidance, facilitation and regulation of urban development through innovative and integrated planning. In the performance of these functions, UDA involves itself in the formulation and

implementation of Regional Structure Plans and Action Plans, effective enforcement of its laws and regulation and effective management and maintenance of the urban infrastructure. Accordingly, UDA's goal is to create at least one primary city in every region, based on regional development criteria and create at least five secondary cities in each region before 2010. UDA intends to complete six Regional Structure Plans and five growth centres during the next two years. The strategy to be followed in achieving these objectives includes securing private sector involvement in planning and implementation, strengthening links with provincial councils, local authorities (LA) and all other relevant line ministries and institutions and other such agencies. Although the development of urban infrastructure is primarily a responsibility of the respective LA, UDA has been playing an important role in upgrading urban centres, as LAs are not technically or financially capable of undertaking such development activities.

The main development activities of UDA have been categorised as the construction of administrative, commercial and industrial complexes, town improvement projects, integrated projects and social and cultural projects. In addition, UDA implemented several projects on behalf of clients and continued to maintain the Land Bank. The total expenditure on implementing these programmes amounted to Rs.719 million in 2000. The sources of funding were the Consolidated Fund (51 per cent), UDA internal generations (35 per cent) and other respective institutions (14 per cent).

UDA invested a sum of Rs.531 million or 74 per cent of its total investments on projects undertaken on behalf of other client institutions. There were about 50 such projects in progress in 2000. The construction of the Presidential Secretariat at Kotte (Rs.205 million) and the Speaker's residence at Battaramulla (Rs.78 million) were two major projects handled by UDA in 2000, under clients' projects. With the long-term objective of developing the City of Colombo as a commercial centre, it has been planned to shift most administrative institutions out of Colombo as envisaged in the Colombo Metropolitan Regional Structure Plan (CMRSP). The main objective of CMRSP is to develop the City of Colombo as a core with facilities for commercial establishments, while increasing economic activities, employment, standard of urban life, housing facilities and other urban infrastructure in the area. A new township development at Malabe (Rs.54 million), re-development of the Badulla bus stand (Rs.39 million) and the construction of a courts complex at Getambe (Rs.20 million) in Kandy were other major client projects that were in progress during 2000. Meanwhile, action is being taken to relocate the Welikada prison and to use this prime land for commercial purposes. Further, to reduce congestion in Pettah, a proposal to relocate the Pettah wholesale market at Orugodawatte was under consideration. Meanwhile, a

master plan and action plans were completed in respect of the proposed Ruhunupura project. The entire Ruhunupura urban design includes a sea port, airport, industries, human settlements and other necessary infrastructure. Further, UDA spent Rs 97 million (14 per cent of total investment) on integrated projects and Rs.36 million on town improvement projects. Under the town improvement project, the construction of low cost housing schemes, public servants' housing schemes and development of several towns were in progress.

### Water Supply and Sanitation

The objective of the national policy on water supply is to ensure that all residents have access to safe drinking water by 2010. Accordingly, the National Water Supply and Drainage Board (NWSDB) formulated an action plan in accordance with the recommendations made by the Presidential Task Force on Housing and Urban Development. The present corporate plan envisages an increase in water supply coverage to 79 per cent by year 2005 from the present 67 per cent. A substantial reduction of non-revenue water and a 24 hour supply of pipe borne water to all consumers by 2005 are other major objectives of NWSDB. At present, the average duration of water availability per day is 21 hours in the Colombo Municipality area, 20 hours in other municipalities and 14 hours in other areas. The investments needed in the water sector up to 2010 to achieve these goals has been estimated at Rs.85 billion by NWSDB. However, government's investment in the water sector over the next 10 years has been estimated to be around Rs.45 billion, i.e., half of the required investment. Therefore, in order to meet the investment gap and also to attract long-term multilateral funds, private sector investment in the water supply sector needs to be encouraged in order to make the goals of NWSDB a reality. A pre-requisite to this is to introduce a rational water pricing policy based on the costs and other economic criteria.

The demand for pipe borne water increases continuously with population expansion, urbanisation and the expansion of industries and commercial activities. There still exists a large unmet demand in this respect, as pipe borne water is presently available only to about one third of the households. On the supply side, NWSDB stands as the apex institution responsible for development, distribution and maintenance of water supply schemes. NWSDB operated 266 water supply schemes with 582,600 connections during 2000. Of the total number of schemes, 29 were in major cities, 116 were in townships and the remaining 121 schemes were in rural areas. The total volume of water supplied by NWSDB increased by 5 per cent to 331 million cubic meters (MCM) in 2000 over the level achieved in the previous year. The number of new connections provided by NWSDB grew by 29 per cent to

77,574. NWSDB is also responsible for the provision of sewerage facilities in high density urban areas, housing schemes and industrial parks.

The total investment in the water supply sector was Rs.3,475 million in 2000, compared with an investment of Rs.4,396 million in 1999. Investment was mainly in the areas of construction, rehabilitation and upgrading of water projects, community water supply projects and environmental improvement projects. NWSDB spent a sum of Rs.2,859 million on new water projects, while a sum of Rs.616 million was spent on upgrading and rehabilitation. Approximately, half of these funds were provided by foreign funding agencies such as ADB, JBIC, IDA and KFW on concessional terms.

One of the major projects undertaken by NWSDB during the year was the ADB assisted Third Water Supply and Sanitation Project (WSSP). The main objective of this project is to improve the health and well being of one million people living in Anuradhapura, Hambantota, Kalutara, Kegalle, Moneragala and Puttalam districts by improving water supply and sanitation facilities and providing education on hygiene. Under this project, the strategies used for the supply of drinking water in rural areas were the installation of tube wells and dug wells, protection of springs and direct supply of pipe borne water. The Towns South of Colombo Water Supply Project, which commenced in 1997, was also in progress with funds provided by JBIC. Under this project, water supply schemes in the Homagama and Kesbewa areas were commissioned during 2000. The total capital investment under the project during 2000 amounted to Rs.460 million. A population of 260,000 will benefit once the project is completed. In addition, the Towns North of Colombo Water Supply Project funded by JBIC, the Eastern Coastal Area Water Supply Scheme funded by the Australian government and the Greater Kandy Water Supply and Environmental Improvement Project funded by JBIC were continued during 2000. In addition to these major projects, NWSDB executed a project to establish tube wells in rural areas, providing benefits to about 35,000 people.

NWSDB is the implementing agency for the Colombo Environment Improvement Project (CEIP) funded by the World Bank. The main project components are the Beira Lake Restoration Project, Establishment of a sewer network in the Ja-ela/Ekala and Ratmalana/Moratuwa areas and the provision of waste water disposal facilities. The Beira Lake Restoration Project is in progress, while the work on the other project components will commence in the near future.

Under the present water tariff, domestic consumers are heavily subsidised by non-domestic consumers. The average cost of producing a unit of water is about Rs.19, but the average tariff payable by a household is about Rs.4.40 per unit, whereas the commercial consumers are charged Rs.30

per unit. The share of the domestic households in the total sales of water was about 52 per cent in 1999, while that of the commercial sector was only 9 per cent, making cross-subsidies unviable. The revenue collection from the domestic sector accounted only for 29 per cent of the total revenue, while the commercial sector accounted for 21 per cent. In view of further increases in operating expenditure in 2001, NWSDB proposed an upward revision of the water tariff by about 20 per cent with effect from January 2001. Plans have also been made to reduce the cross-subsidy to the domestic sector.

### **Integrated Rural Development Programme**

The Integrated Rural Development Programme (IRDP) was launched in 1979 as a district programme with heavy investment in infrastructure development. The aim of the project was to widen economic opportunities through local initiatives with a view to raising the living standards of rural people. In addition, the Programme intends to promote a balanced growth in order to reduce disparities within a district as well as between districts. Since 1989 the programme has focussed its attention on the involvement of the private sector in employment and income generation in the rural areas, strengthening participatory approaches for the disadvantaged rural people and decentralisation. From 1997, the IRDP was reoriented towards a Regional Economic Advancement Programme (REAP). REAP is formulated with the objective of reducing regional disparities, poverty alleviation and providing more equitable opportunities for people living in all parts of the country.

REAP, consisting of 19 projects, now covers 17 districts. The total utilisation of funds under the above programme was Rs.1,293 million in 2000 against its programmed budget of Rs 1,600 million and recorded an 80 per cent performance. The ADB funded North-Central Province Rural Development Project (NCP-RDP) which covers the Anuradhapura and Polonnaruwa districts, was the major user of funds in 2000. The Southern Province Rural Development Project, funded by ADB, was completed in 2000. The Project undertook development activities in irrigation, roads, and small and medium scale industries and village development. The UNDP funded Area Based Growth With Equity Project, which commenced in 1998 covering the Uva Province, spent Rs 122 million during 2000 for its development activities.

### **Samurdhi Programme**

The Samurdhi programme, which has been in operation since 1995 with the primary objective of alleviating poverty, continued its activities in 2000, providing direct cash grants to more than two million families. In addition to its income supplementary programme, community and infrastructure development projects, savings programmes, banking and credit programmes, social insurance programmes, training

and entrepreneur development programmes and self-employment schemes have also been organised under the Samurdhi programme, with the objective of uplifting the socio-economic conditions of low income groups. Since the inception of the Samurdhi programme, the value of cash grants received by individual families remained unchanged and as a result, the real value of the grant had dropped by nearly 37 per cent by end 1999. Hence, Samurdhi payments were increased by 40-150 per cent in 2000, which more than offset the drop in the real value of the benefits in previous years. The coverage of the Samurdhi programme has risen steadily from 1.4 million families in 1995 to a little over 2 million families in 2000, indicating the absence of an effective target as well as an exit system. Therefore, it is essential to have an effective screening process and an exit mechanism as far as the sustainability of the Samurdhi programme is concerned.

In 2000, the cost of the Samurdhi Income Supplementary Programme rose significantly by 22 per cent to Rs.9,938 million, mainly due to the increase of the cash value of benefits to all Samurdhi beneficiaries, except those who received Rs.1,000 per month. The cash grants to families which were receiving Rs. 500, Rs. 200 and Rs. 100 per month, increased to Rs.700, Rs.350 and Rs.250, respectively, from August 2000. Meanwhile, payments to former Janasaviya recipient families increased to Rs.400 per month from Rs.250 per month. In addition, 154,218 displaced families in the North and East received benefits from the Dry Ration Scheme. The total cost of this programme was Rs.1,684 million in 2000.

The Samurdhi Janatha Projects, introduced with the objective of improving rural infrastructure with community participation, continued in 2000. A sum of Rs.140 million was approved, compared with 1,123 community projects

identified during the year. At the end of 2000, 86 per cent of the work on these projects had been completed.

Samurdhi beneficiaries were offered a wide range of savings and credit facilities with a view to inculcating savings and investment habits and promoting entrepreneurship skills. By end 2000, a total of 255,404 small savings groups had saved a sum of Rs.735 million under the Voluntary Savings Scheme (VSS). Meanwhile, savings under the Samurdhi Compulsory Savings Scheme (CSS) increased by 21 per cent to Rs. 6,329 million at end 2000.

Samurdhi Banking Societies (SBS) have been established to promote savings and provide credit facilities to Samurdhi beneficiaries, thereby enhancing economic activities at the village level. There were 920 SBS at end 2000. The total number of accounts opened since the commencement of the SBS stood at 1.5 million. The total savings at SBS amounted to Rs.1,588 million, while SBS had granted loans to the value of Rs.2,745 million at end 2000. The recovery rate of these loans was 100 per cent. The Samurdhi banks are now handling large sums of money that belong to low income groups and provide a wide range of financial services. Therefore, it is imperative to establish an effective management system with at least minimum standards, to ensure the sustainability of SBS.

## Environment

Conservation and rational management of the environment have been recognised as a national priority. A wide range of policies, laws and regulations are available for this purpose, although there have been some lapses and weaknesses in enforcement. In place of command and control types of methods, market based economic instruments, in particular fiscal and financial instruments, are being widely used in many countries for the

**TABLE 5.11**  
**Samurdhi Welfare Programme**  
**Number of Beneficiary Families and Value of Grants**

| Cash Grant<br>Amount (Rs.)                     | 1998             |                  | 1999             |                  | 2000 (a)         |                  |
|--|------------------|------------------|------------------|------------------|------------------|------------------|
|  | No. of Families  | Value<br>(Rs.Mn) | No. of Families  | Value<br>(Rs.Mn) | No. of Families  | Value<br>(Rs.Mn) |
| <b>Samurdhi Income Supplementary Programme</b> |                  |                  |                  |                  |                  |                  |
| Rs.1,000                                       | 14,359           | 172              | 12,043           | 145              | 10,516           | 126              |
| 500 (Rs. 700 with effect from August 2000)     | 896,783          | 5,381            | 899,083          | 5,395            | 897,663          | 6,285            |
| 200 (Rs. 350 with effect from August 2000)     | 323,710          | 777              | 329,588          | 791              | 359,211          | 1,132            |
| 100 (Rs. 250 with effect from August 2000)     | 216,445          | 260              | 219,788          | 264              | 223,857          | 437              |
| 250 (Rs. 400 with effect from August 2000)     | 521,886          | 1,566            | 527,009          | 1,581            | 521,856          | 1,957            |
| Rs.125   |                  |                  | 142              | 0.2              | 382              | 0.6              |
| <b>Total</b>                                   | <b>1,973,183</b> | <b>8,155</b>     | <b>1,987,653</b> | <b>8,175</b>     | <b>2,013,685</b> | <b>9,936</b>     |
| <b>Dry Ration Programme</b>                    |                  |                  |                  |                  |                  |                  |
| Rs. 336 -1260 (b)                              | 125,343          | 1,400            | 154,932          | 1,694            | 154,218          | 1,684            |
| <b>Nutrition Programme</b>                     |                  |                  |                  |                  |                  |                  |
| Rs.100   | 81,225           | 97               | 80,718           | 97               | 83,575           | 138              |
| <b>Grand Total</b>                             | <b>2,179,751</b> | <b>9,652</b>     | <b>2,223,303</b> | <b>9,966</b>     | <b>2,251,478</b> | <b>11,760</b>    |

(a) Provisional (b) As at end 2000

Source: Department of Poor Relief

management of the environment. These instruments, which include environmental tax and charge systems, deposit refund systems, establishment of property rights, creation of markets and liability systems, loans, grants, subsidies etc., are being used effectively in managing the environment. Environmental policies adopted in Sri Lanka in recent years also show greater emphasis on the use of economic instruments in managing the environment.

The Ministry of Forest and Environment (MFE) is primarily responsible for formulating environmental policies at the national level, while the Central Environmental Authority (CEA) functions as the regulatory authority. The private sector is also involved in environmental projects in a limited way, while NGOs play a significant role. The MFE implemented several programmes in 2000, aimed at conservation and management of the environment. A national policy on air quality management has been developed under the Clean Air 2000 Action Plan. Accordingly, vehicle emission standards, fuel quality standards and vehicle importation standards were gazetted in 2000. The Ministry prepared a three-year action plan to mitigate adverse environmental and health impacts of the use and disposal of plastics. Under the plan, the Ministry is also studying possibilities of introducing degradable plastics as a substitute for non-degradable plastics. Uncontrolled sand mining in rivers, particularly mining at inappropriate locations, is a serious environmental problem. The MFE has embarked on a study to find ways and means of mitigating the adverse environmental impact of sand mining, while providing the continuous supply of sand needed for the construction industry. In order to prevent pollution of waterways, the MFE initiated a pilot project called the 'Pavithra Ganga' programme to keep water bodies clean, with the co-operation of the respective local government authorities. Solid waste management has been a perennial environmental and social problem, especially in urban areas. With a view to finding a permanent solution for this, the MFE has prepared a National Strategy for Solid Waste Management and a three-year action plan, along with pilot projects. The national strategy covers waste avoidance or reduction, reuse, recycling and final disposal of residual waste in an environmentally sound manner. Coral mining, which leads to loss of bio-diversity and coastal erosion, is a serious environmental problem in the coastal areas. In order to avoid coral-based lime production, the MFE took initiatives to introduce an improved kiln, with the help of the Industrial Technology Institute (ITI), to produce good quality lime from dolomite.

The MFE has commenced a series of studies with assistance from the Department of Agriculture and the University of Peradeniya to develop economic instruments

that could be used for control of soil erosion, ground water management and waste management. Further, action has also been taken to prepare a directory of eco-business and theoretical and field manuals for application of environmental economic techniques for project appraisal.

Sri Lanka has signed more than 30 environment related international conventions and protocols involving various public sector institutions. With a view to improving the co-ordination of the implementation of these conventions and protocols, it has been planned to set up an International Convention Secretariat. The MFE is the Competent Authority for the implementation of the Basel Convention on the Control of Transboundary Movement of Hazardous Waste, the Montreal Protocol to control the use of ozone depleting substances and the United Nations Framework for Convention of Climate Change (UNFCCC). Meanwhile, a number of environmental projects were carried out under the NORAD Environmental Co-operation Programme and the Environment Action 1 Project, financed by the International Development Association (IDA).

The CEA, the regulator of the environment, is mainly involved in the issue of Environmental Protection Licences (EPL) for polluting industries, preparation of pollution control guidelines, monitoring activities, setting pollution control standards etc. During 2000, the CEA issued 392 new EPL compared to 329 in 1999. The CEA continued to monitor industrial pollution in terms of effluent discharge, air and noise pollution. In 2000, the CEA analysed 276 samples of industrial effluents, 49 noise measurements and 4 ambient dust samples. The two fixed ambient air quality monitoring stations in Colombo were in continuous operation and parameters such as levels of sulphur dioxide, nitrogen dioxide, carbon monoxide, ground level ozone and suspended particulate matter (PM 10) were being monitored at these stations. According to the CEA, the sulphur dioxide and ozone concentrations are gradually rising in the City of Colombo but are still below the WHO threshold levels.

The CEA conducted 8 Environmental Impact Assessments (EIA) in connection with major development projects and 19 Initial Environmental Evaluations (IEE) in 2000. Under the programme of monitoring major water bodies in the country, the CEA continued to test the water quality of the Kelani river and Kandy Lake. In addition, the CEA analysed 410 surface water samples and 9 ground water samples during 2000, in order to ascertain water quality. In 2000, the CEA received 1,081 environmental complaints from the public. The major ones were investigated by the CEA itself, while the others were referred to the relevant agencies for investigation.