JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
CEYLON ELECTRICITY BOARD
THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

MASTER PLAN STUDY FOR DEVELOPMENT OF THE TRANSMISSION SYSTEM OF THE CEYLON ELECTRICITY BOARD

FINAL REPORT

JANUARY 1997

NIPPON KOEI CO., LTD.
TOKYO, JAPAN

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PREFACE

In response to a request from the Government of the Democratic Socialist Republic of Sri Lanka, the Government of Japan decided to conduct the Master Plan Study for Development of the Transmission System of the Ceylon Electricity Board and entrusted the study to Japan International Cooperation Agency (JICA).

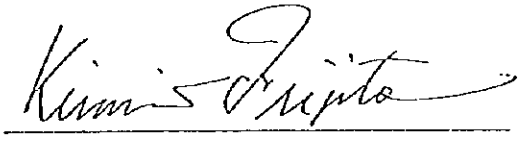
JICA sent a study team led by Mr. Sumio Tsukahara of Nippon Koei Co., Ltd. to the four times from January 1996 to December 1996.

The team held discussions with the officials concerned of the Government of the Democratic Socialist Republic of Sri Lanka, and conducted related field surveys. After returning to Japan, the team conducted further studies and complied the final results in this report.

I hope this report will contribute to the promotion of the plan and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Democratic Socialist Republic of Sri Lanka for their close cooperation throughout the study.

January 1997



Kimio Fujita
President
Japan International Cooperation Agency

MASTER PLAN STUDY
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DEVELOPMENT OF THE TRANSMISSION SYSTEM
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GLOSSARIES AND UNITS

(1) AGENCIES

ADB	: Asian Development Bank
BOI	: Board of Investment
CCITT	: Consultative Committee of International Telephone and Telegram
CEA	: Central Environmental Authority
CEB	: Ceylon Electricity Board
CECB	: Central Engineering Consultancy Bureau
DAC	: Development Assistance Committee
DGEU	: Department of Government Electrical Undertakings
EEC	: European Economic Community
IEC	: International Electrotechnical Commission
IMF	: International Monetary Fund
JCI	: Japan Consulting Institute
JICA	: Japan International Cooperation Agency
LECO	: Lanka Electricity Company Limited
MEP	: Mott Ewbank Preece
MIPE	: Ministry of Irrigation, Power and Energy
MOF	: Ministry of Finance
NK	: Nippon Koei Company Limited
OECD	: Organization for Economic Cooperation and Development
OECF	: Overseas Economic Cooperation Fund of Japan
UNDP	: United Nations Development Program
WB	: World Bank

(2) TERMS

AAAC	: All Aluminum Alloy Conductor
ACSR	: Aluminum Conductor Steel Reinforced
AFC	: Automatic Frequency Controller
AGM	: Additional General Manager
AVR	: Automatic Voltage Regulator
B/C	: Benefit Cost Ratio
BIL	: Basic Insulation Level
BOO	: Build, Own and Operate

BOT	: Build, Operate and Transfer
BS	: British Standard
CATV	: Cable Television
CB	: Circuit Breaker
CCC	: Communication Control Center
CCPI	: Colombo Consumer1s Price Index
CE	: Chief Engineer
CFL	: Compact Fluorescent Lamp
CIF	: Cost, Insurance and Freight
CRF	: Capital Recovery Factor
CT	: Current Transformer
DGM	: Deputy General Manager
DS	: Disconnecting Switch
DSM	: Demand Side Management
EIA	: Environmental Impact Assessment
EL	: Elevation
FC	: Foreign Currency
FOB	: Free On Board
GDP	: Gross Domestic Product
GIS	: Gas Insulated Switchgear
GM	: General Manager
GNP	: Gross National Product
GS	: Galvanized Steel
GSS	: Grid Substation
HF	: High Frequency
HV	: High Voltage
IDMT	: Inverse Definite Minimum Time
IKL	: Iso-Keraunic Level (Number of thunderstorm days per year)
IP	: Implementation Program
IPP	: Independent Power Producer
IRR	: Internal Rate of Return
LA	: Loan Agreement
LC	: Local Currency
LDC	: Load Dispatching Center
LNG	: Liquefied Natural Gas
LPG	: Liquefied Pressurized Gas
LOLE	: Loss Of Load Expectation
LOLP	: Loss Of Load Probability

LRMC	: Long Run Marginal Cost
LV	: Low Voltage
MV	: Medium Voltage
NEA	: National Environmental Act
O&M	: Operation and Maintenance
ODA	: Official Development Aid
OH	: Overhead
OPGW	: Composite Fibber Optic Overhead Ground Wire
PAX	: Private Automatic Exchange
PC	: Personal Computer
PLC	: Power Line Carrier
PLTS	: Party Line Telephone System
PPI	: Private Power Investor
PS	: Power Station
PSS	: Power System Stabilizer, Primary Substation
PSS/E	: Power System Simulator for Engineering of Power Technologies Inc. of USA
RTU	: Remote Terminal Unit
S/W	: Scope of Work
SCADA	: Supervisory Control and Data Acquisition System
SCC	: System Control Center
SS	: SubStation
SSB	: Single Side Band
SVC	: Static Var Compensator
SVR	: Step Voltage Regulator
T&D	: Transmission and Distribution
UG	: Underground
UHF	: Ultra High Frequency
UK	: United Kingdom
UPS	: Uninterrupted Power Supply equipment
USA	: United States of America
VHF	: Very High Frequency
VT	: Voltage Transformer
WASP	: Wien Automatic System Planning Program

(3) UNITS

bps	: bit per second	
dB	: decibel	
mm	: millimeter	
cm	: centimeter	
m	: meter	
km	: kilometer	
mm^2	: square millimeter	
cm^2	: square centimeter	
m^2	: square meter	
km^2	: square kilometer	
kg	: kilogram	
t	: metric ton	
m^3	: cubic meter	
m^3/s	: cubic meter per second	
A	: ampere	
mV	: milivolt	
V	: volt	
kV	: kilovolt	
kW	: kilowatt	
MW	: Megawatt	$= 10^3$ kW
GW	: Gigawatt	$= 10^3$ MW
kVA	: kilo voltampere	
MVA	: mega voltampere	$= 10^3$ kVA
GVA	: Giga voltampere	$= 10^3$ MVA
kWh	: kilowatt hour	
MWh	: megawatt hour	$= 10^3$ kWh
GWh	: Gigawatt hour	$= 10^3$ MWh
rpm	: revolutions per minute	
Hz	: Hertz (cycles per second)	

(4) CURRENCY EQUIVALENTS

Exchange rates on 28 December, 1995:

	Buying	Selling
1.0 US Dollar	SLRs 53.39	SLRs 53.90
10,000 Japanese Yen	SLRs 5153	SLRs 5271

CHAPTER 1

INTRODUCTION

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INTRODUCTION

1.1 Background of the Project

The electric power demand of Sri Lanka has been growing rapidly in the recent years reflecting vigorous economic activities in the country. The average annual growth rate of the sold energy during the recent five years from 1990 to 1995 was high, being 8.4%. However, the generation expansion plan to satisfy thus growing demand has not been executed timely, which has resulted in the power shortage in 1996 due to the unexpected small rain. Due to the depletion of large and economic hydro development sites and financial constraints for development funds, construction of power projects to meet the growing demand is delaying. Actually, there has been no addition of major power plants since 1992 when the Samanalawewa hydroelectric project was commissioned.

With assistance of the World Bank, the WASP III program to work out a long-term economically optimal generation expansion plan involving hydro power projects was introduced to the Ceylon Electricity Board (CEB) in 1984. With the help of this program, CEB can prepare their own long-term generation expansion plans themselves and such works have been carried out by the Generation Planning Branch in the Planning Division at every occasion. CEB's planning effort in the recent years has been concentrated on the generation expansion planning, and a systematic long-term transmission system development study which requires laborious power system analyses has not been carried out for a long time.

Aiming to carry out a long-term transmission system planning with foreign technical assistance, the Government of Sri Lanka officially applied to the Government of Japan for Technical Cooperation to the Master Plan Study on the Development of Transmission System of the Ceylon Electricity Board by a letter from the Ministry of Finance (MOF) in October, 1994. In response to this request, the Government of Japan decided to implement this technical cooperation and entrusted the Japan International Cooperation Agency (JICA), the official agency responsible for the implementation of technical cooperation programs of the Government of Japan. The mission organized by JICA visited Sri Lanka and discussed about implementing methods of the Study. The Scope of Works, that described works to be performed in the intended Study, were agreed between CEB and JICA, and an agreement was signed in July 1995.

1.2 Objective, Area and Scope of the Study

1.2.1 Objective of the Study

The prime objective of the Study was to formulate a long-term transmission system development plan of the whole CEB power system for the period of 1996 to 2015 based on an estimated power demand forecast and a corresponding generation expansion plan, to prepare preliminary design of the planned transmission facilities and to compile a Master Plan Report. The Study also aimed to transfer the technology of

transmission system planning works to CEB counterpart engineers so that the CEB engineers could acquire knowledge to perform similar studies themselves in future.

1.2.2 Study Area

The electricity supply, from its nature as the basic infrastructure necessary for human lives and for economic activities, must be afforded impartially to all people in the country. Therefore, the CEB's transmission system shall cover whole the country including areas currently not well fed with electric power.

Under such a situation, the objective area of the Study covered the whole area of Sri Lanka.

1.2.3 Contents of the Study

Contents of the Study which were agreed between CEB and JICA, and have been carried out, are mentioned below:

(1) Collection and review of existing data and information related to the Study

(2) Review and study to formulate future transmission systems:
   a) Review and study of the existing transmission system.
      - Power station facilities
      - Transmission lines and substation facilities

      The latter shall include review and study of consequence of actual faults, system protection, system control, and maintenance and management of transmission lines and substations system.
   b) Review and study of the existing transmission system extension plans:
      - Power station facilities
      - Transmission line facilities
      - Grid substation facilities
   c) Operating situation of the transmission system
      (frequency variation, voltage profile, etc.)
   d) Load dispatching and telecommunication systems
   e) System losses
   f) Electricity tariff system

(3) Power demand forecast
   a) Actual demand of the past 20 years (whole country, per province area, per consumption sector, and daily, monthly and yearly load curves)
   b) Power demand forecast up to 2015

(4) Formulation of criteria and standards for power supply reliability to be applied to the transmission system planning

(5) Transmission system analysis
   The following system analyses shall be conducted for the selected years of present (1995), short term (2000), medium term (2005), and long term (2010 and 2015).

a) Power flow calculation

b) Review of equipment capacity

c) Analysis of transient stability

d) Study of short circuit and earthing current

(6) Assessment of power supply reliability of the planned transmission system

(7) Formulation of an optimum transmission system development plan

An optimum transmission system development plan for the period of 1996 to 2015 shall be formulated based on the most appropriate generation expansion program.

(8) Preliminary design

Preliminary design of transmission lines and grid substations shall be conducted on the selected transmission system extension plans, covering selection of transmission voltage, single line connection, bus system, capacity of grid substations, etc.

(9) Cost estimation

Annual fund requirement during the plan period for the execution of the selected transmission system extension shall be roughly estimated.

(10) Economic and financial analysis

1.3 Schedule of the Study

(1) Preparatory Studies

Prior to commencing the Study, available data and information on general situation of Sri Lanka and present conditions of the CEB power system including generation and power transmission facilities were collected and analyzed in Japan. The execution plan of the Study was worked out, then the Inception Report was prepared referring to the terms of reference presented by JICA, describing in detail the proposed procedures of the Study to be carried out.

(2) The First Site Works

The first site works was commenced on 17 January 1996 by arrival of the JICA study team in Sri Lanka and finished on 15 February by returning to Japan. On arrival in Colombo, the contemplated work flow and schedule of the Study were explained to CEB based on the Inception Report, and various discussions were held with CEB regarding basic concepts on contents of the Study, mutual cooperation among each other, collection of data and information, etc.

Major work items which were carried out during the first site works are as given below:

- Collection of data on general situation and institutional matters of electricity supply organizations.
- Collection of data on historical records of power consumption and available long-term demand forecast by CEB.

- Collection of data and information on the existing facilities of power stations, transmission lines, line protection systems, grid substations, load dispatching system, communication systems and distribution systems.
- Collection of information on CEB's future plans for power generation expansion and transmission system extension.
- Discussion on study procedures for power system analysis, power supply reliability assessment, database preparation, power system loss study, etc.
- Collection of data for power system loss and power tariff system.

Whole the above necessary data were not obtained during the stay of the JICA study team, however supplemental data were additionally collected by the study team and provided by CEB at the time of the second site works.

The supplemental works for data analysis and compilation, drawing preparation, etc. were carried out in Japan during the First Home Works.

(3) The Second Site Works

The JICA study team arrived in Colombo on 28th May, 1996 to perform the second site works for the period of two months. The team returned to Japan on 26th July, 1996.

The second site works comprise the major portion of the Study and the following works were carried out:

- Finalization of area and substation-wise power demand forecast up to 2000 and 2005 respectively maintaining good cooperation with CEB counterparts in head quarter and in provinces.
- Preparation of preliminary transmission system plans for the years 2000, 2005, 2010 and 2015.
- Cooperation to power system analysis which was carried out by CEB engineers for the 1995 and 2000 systems.
- Power supply reliability analysis for the 1995 system using the TPLAN program.
- Supplemental collection of data and information of the existing system.
- Site inspection of most concerned transmission facilities and demand situation except for those in the northern and eastern provinces.
- Collection of data and information necessary for preliminary design of transmission system facilities, and execution of some design works.
- Preparation of the Progress Report.

The results of the second site works were supplemented in Japan by analytical works and preparation of preliminary design. The results of Study up to this stage was compiled as the Interim Report.

(4) The Third Site Works

The JICA study team arrived in Colombo on 2 September, 1996 and stayed for one and a half months to carry out the third site works and left on 16 October, 1996.

Basically, the third site works were the continuation of the second site works and the following works were performed:

- Submission of the Interim Report, explanation and discussions on contents.

- Finalization of CEB area and substation-wise demand forecast for 2010 and 2015.
- Review of transmission system plans and finalization of urgently required development projects.
- Cooperation to power system analysis by CEB engineers for power flow and fault calculations, and transient stability analysis for the 2005, 2010 and 2015 power systems and review of results.
- Power supply reliability analysis for the planned power systems for 2000, 2005, 2010 and 2015 using the TPLAN program, and evaluation of the CEB power system.
- Preliminary design of the planned transmission lines and substations.
- Site inspection to transmission system extension project sites.
- Opening a seminar on power supply reliability.

After returning to Japan, all the study results were compiled and the Final Report (draft) was prepared.

(5) The Fourth Site Works

The JICA study team arrived in Sri Lanka on 1st December, 1996 and returned to Japan on 15th December, during their stay the following works were performed:

- Submission of a draft of the Final Report.
- Explanation of report contents and discussion on the report.
- Seminars on power system analysis, power demand forecast and transmission system planning.

The Final Report was prepared by amending the draft as required after receiving official comments from CEB.

1.4 Personnel Related to the Study

The Sri Lankan side organization to participate in the Study was CEB. The Study works have been undertaken in the CEB head quarter with good cooperation of the CEB counterpart engineers.

(1) CEB Organization

The CEB's organization in charge of the Study was the Planning Division headed by the Additional General Manager (Planning), Mr. D. G. D. C. Wijeratne, who was assisted by the Deputy General Manager (Transmission Planning), Mr. Ranil Lokubalasooria / Mrs. Yamuna Samarasinghe. This division consists of six branches of Generation Planning, Transmission Planning, Pre-Electrification, Load Forecasting and Tariffs, Electronic Data Processing, and Demand Side Management. The Chief Engineer, Transmission Planning, Mr. M.A.W. Ranasinghe of the division has been assigned in the Study to coordinate between the two parties covering all the site work period. Cooperation of other concerned specialists was available all the time through this engineer. The list of counterpart engineers participated in the Study is in Appendix, Clause A1.1.

(2) JICA Study Team

The Mater Plan Study for the Development of the Transmission System for CEB have been carried out by the team of consultants of Nippon Koei Co., Ltd. of Japan (NK), which was appointed by JICA, with personnel recruitment from Mott, Ewbank and Preece (MEP) of the United Kingdom. The team leader

was Mr. Sumio Tsukahara, the Senior Power Transmission System Engineer of Nippon Koei Co., Ltd. The list of JICA team members is included in Appendix, Clause A1.1.

1.5 Provision of Equipment

The following equipment and software were provided by JICA to promote the execution of the Study by the JICA study team during the study period and have been handed over to CEB on completion of the Study, in accordance with a provision in the Agreement:

(1) Personal computer — 1 set

IBM PC-300

CPU	:	Pentium 133 MHz
HD	:	1.2 GB
RAM	:	16 MB

(2) Display equipment — 1 set

IBM 20 inches colour monitor

(3) Laser printer — 1 set

HP 4V laser printer

(4) X - Y plotter — 1 set

Graphtec flatbed plotter MP 5100

(5) Computer software — 1 lot

- TPLAN in the PSS/E program of PTI
- Microsoft Windows 95
- Microsoft Office Professional

Provision of the TPLAN program was decided during execution of the Study based on additional request of CEB as a necessary tool for carrying out the power supply reliability assessment. The use of this program was first proposed by the power supply reliability specialist of the JICA team. This program was used by the JICA specialist during the study period, and later handed over to CEB. This program will be used by CEB engineers in future for their system reliability assessment.

1.6 Transfer of Technology to Counterpart Engineers

A transmission system plan is dependent to the substation-wise demand forecast and generation expansion plan. Therefore, the transmission system extension plan must be reviewed every time when preconditions of the plan, either demand forecast or generation plan, are revised. It is normal practice for a power utility to prepare around 10 year extension plan for transmission system extension as a revolving plan together with demand forecast and generation expansion plan. Such study must in future be performed by CEB and therefore acquisition of technologies by CEB engineers is very important.

The transfer of technology to CEB counterparts have been performed on the on-the-job training basis by working together through the study period. Various discussions were held to exchange ideas on power

system planning issues and project sites were inspected, which would be helpful for the transfer of knowledge. Seminars on the selected subjects, power system analysis, power supply reliability problems, demand forecast and transmission system planning were held for transfer of technologies to the CEB engineers.

A specialist from Power Technologies Inc. of the USA during the second site works of the JICA team to conduct training course to the JICA member and CEB engineers on the TPLAN software package.

In addition, two CEB engineers were invited to Japan under the training program of JICA. They were trained by JICA and the consultant, Nippon Koei Head Office.

The first CEB engineer, Mr. A.C.S. Wijayatilake, Electrical Engineer of the Transmission Planning Branch, came to Japan for the period of one month from the middle of March 1996 for training on the power system analysis and study on the actual power system facilities in Japan. He carried out in the power system analysis calculation of the Study

The second CEB engineer, Mr. M.A.W. Ranasinghe, Chief Engineer of the Transmission Planning Branch, came to Japan in the end of October 1996 and stayed for one month to study about transmission system planning and actual power system facilities in Japan. He was assigned as the coordinator for the Study.

CHAPTER 2

GENERAL DESCRIPTION OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

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GENERAL DESCRIPTION OF THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

2.1 Profile of the Country

2.1.1 Geography and Population

Sri Lanka is an island country with a land area of 65,610 km^2 floating in the Indian Ocean to the south-east of India with only 30 km separation. The country lies in the tropical region between latitude of 6° and 10° north and longitude of 80° to 82° east, and the land extends 435 km from north to south, and 225 km from east to west.

Geographically, Sri Lanka has four distinct regions: 1) warm and wet coastal plains of the west and south which is Sri Lanka's granary region; 2) hot and dry south-eastern coast and the jungle plains of the north central areas; 3) the central mountainous wood-covered region with cool climate; and 4) the northern peninsula with harsh landscape and dry climate.

Several rivers with large water flow originate from the central mountains, and the largest of them is the Mahaweli river of over 330 km in total length with its estuary near Trincomalee facing the Bay of Bengal. With rich rainfall in the mountainous areas, these rivers have abundant river flow with large potential difference, and thus are suitable for development of hydroelectric resources.

Sri Lanka is administratively divided into nine provinces and each province has two to five districts as shown in Fig. 2.1.1-1.

The 1995 estimated population of Sri Lanka was 18,112,000, and the population growth rate during the recent 10 years was 1.4%. The population density was 276 person/km^2. The number of household was 3,878,000 and the average number of person per household was 4.67.

Sri Lanka is a multi-racial country and ethnically divided into the predominantly Buddhist Sinhalese, who make up 70% of the population, Hindu Tamils, who make up 15% of the population, Islamic Moors, who make up 7% of the population, and others being 8%.

2.1.2 Climate

The land is in the tropical zone and generally endowed with much rain, and temperature and humidity are high all the year round.

In the lowlands including Colombo, the mean annual temperature is 27°C with the mean daily range of 6°C. In the central highland the average temperature is below 15°C with the mean daily range of 10°C. The temperature is highest in April to May and lowest in January.

In Sri Lanka, there are two monsoon seasons, the south-west monsoon season (May to September) and the north-eastern monsoon season (December to February). In the western side of the country, there is much rainfall even during the intermonsoon periods, April - May and October - November. While, in the

eastern side of the country there is much rain in the period of November to January. The annual rainfall in Sri Lanka varies from 900 mm to 6,000 mm location by location. The high values are recorded on the western slope of the central highlands, called as "wet zone", and low values in the north-western and south-eastern lowlands, called as "dry zone". The average annual rainfall of the country during the period of 1949 to 1984 was 1,915 mm. The annual rainfall and its monthly distribution at various locations in the country are shown in Fig. 2.1.2-1.

The humidity is high throughout the year in all the country. The relative humidity varies generally from 70% during the day to 90% at night with the average of 80%. In the arid area, the day time humidity drops to about 60%.

Wind is generally mild, but strong gust has been recorded sometimes. The frequency of lightning strokes is high especially in mountainous areas, however systematic data for annual thunderstorm days are not available. The Iso-Keraunic Level (IKL), the number of thunderstorm days in a year, is estimated to be not less than 60.

Under such climatic conditions, the three major plantation vegetation grow in the country, tee trees in the south-western mountainous areas, rubber trees in the low hills and coconuts in the seashore areas. The northern areas of the country except for Jaffna peninsula are covered with natural forest.

2.1.3 Political Structure

Sri Lankan governmental system is the executive president system. The President is the head of the state and the government. The President is elected by the people every six years. The cabinet of ministers, including the prime minister, is nominated by the President from majority party in parliament. The Parliament is of unicameral legislature; 225 members directly elected for six years term by a modified proportional representation. The last national elections were held in August 1994 (parliamentary), and in November 1994 (presidential).

Mrs. Chandrika Bandaranayake Kumaratunga took office as President in November 1994 after winning a record majority. The People's Alliance (PA) formed a minority government in August 1994. The PA is a governing coalition party of which main members are the Sri Lanka Freedom Party (SLFP), Tamil Democratic People's Liberation Front (PLOTE) and Sri Lanka Muslim Congress (SLMC).

Under the 13th amendment to the constitution passed in November 1987, extensive powers were devolved to the nine directly elected provincial councils, primarily with a view to meeting Tamil demands for greater autonomy. Elections to seven of these councils were held in May 1993. The Government published on 16 January 1996 a comprehensive devolution plan in the form of Draft Constitutional Provisions. This plan, the most comprehensive revision of Sri Lanka's constitution since independence, would devolve considerable powers to the country's regions and redrew present provincial boundaries.

2.1.4 Administrative Structure

The public sector in Sri Lanka consists of three interrelated branches: the Government, public enterprises, and a broad range of public institutions. The central government includes the presidency, the parliament, the judiciary, 28 ministries, and several other departments and agencies which are covered by the central government budget. The local government subsector also includes district, municipal, urban, and village

councils, which provide financial, technical, and other services, and oversee the implementation of social development projects.

Sri Lankan approximately 200 public enterprises encompass a variety of organizational forms, including commercial enterprises, boards, bureaus, authorities, corporations, agencies, and institutions. In 1994, the central government made budgetary transfers to over 90 public corporations and institutions, including the following sectors: agriculture and fisheries, manufacturing and mining, energy and water supply, trade and commerce, transport and communications, and development. The largest recipients were the Mahaweli Authority, the CEB, the Central Transport Board, the National Water Supply and Drainage Board, and the Road Development Authority, which were generally engaged in large-scale infrastructure projects.

2.2 Economy

Sri Lankan Economy described here is mainly based on the latest available materials, i. e., the Central Bank of Sri Lanka's Annual Report for the year of 1994 published in June 1995. The 1995 economic outlook will be briefly touched upon at the end of this section.

2.2.1 Overall Economy

Over the past four years, Sri Lanka has experienced real economic growth of around 5.5% per year (see Table 2.2-1). According to government statistics, economic liberalization and structural reforms have had some economic effects. Nevertheless, these effects have been reduced by Sri Lankan huge annual deficits (See Table 2.2-3).

Even with the addition of foreign aid to Sri Lankan revenues in its general account, the country's finances have been unable to escape from the pressure of military expenditures and assistance to refugees. In the recent years Sri Lankan trade deficit has soared, and the country has run constant current account deficits (See Table 2.2-5). In 1994, unpaid foreign obligations totaled 434.9 billion Rupees (or US$ 8.7 billion) (See Table 2.2-9), and this corresponds approximately to four times annual government revenues. The ratio of domestic savings to GDP is ten percentage points less than the ratio of investment in GDP (See Table 2.2-2). This gap has been met through direct investment and borrowing foreign capital.

Agriculture, forestry and fishing constitutes 21% of the Sri Lankan GDP. Other key industries are manufacturing at 20%, construction at 7%, transportation, warehousing and telecommunications at 11%, and wholesaling and retailing at 22% (See Table 2.2-1). By ratio of number of employees in 1994, agriculture, forestry and fishing occupies 39% of the labor force, with manufacturing at 13%, construction at 5%, merchandising and hotels at 11%, and services at 21% (See Table 2.2-15). These figures demonstrate that the Sri Lankan economy relies heavily on agriculture. While manufacturing has increased its share of value added, agriculture and services bear the main burden for absorbing the labor force. Since unemployment has reached double digits (See Table 2.2-2), creating employment opportunities is a major policy imperative for the government. Although the consumer price index for Colombo has shown double digit inflation over the past six years, inflation fell to 8.4% in 1994. There are still concerns over inflation, however, as money supplies continue to grow, despite the government's tight monetary policy.

Gross energy supplies in Sri Lanka during 1994 amounted to 7.6 million tons when converted to petroleum measurements. Commercial energy consumption (petroleum, electricity, LPG, etc.) rose from 32% during 1993 to 34% of total energy during 1994. Non-commercial energy occupied 66% of total energy consumption, and consisted of firewood, agricultural waste, unused animal parts, and cellulose fiber materials. In 1994 demand for petroleum products increased resulting from larger consumption of diesel fuel for automobiles (10% over the previous year), heavy diesel fuel, gasoline and kerosene. Sri Lanka imported 1.9 million tons of crude, amounting to 6.2% of total imports of the country. Nevertheless, the cost for imported petroleum has declined as a result of the slack international petroleum market.

2.2.2 National Budget

During 1994 government revenues amounted to 110 billion Rupees (12% increase over the preceding year), and expenditures reached 157.5 billion Rupees (16% increase over the preceding year) (See Table 2.2-3). Simple calculation of these amounts yields a deficit of 47.5 billion Rupees (27% increase over the preceding year). This deficit corresponds to 45% of the government revenues. Tax revenues constituted 99.4 billion Rupees of government income. The main source of tax revenue was commodity and service taxes, which added 56.7 billion Rupees to the government coffers (an increase of 18% over the previous year). Chief among the commodity and services taxes were the defense tax, which was increased to 3.5% in January of 1994, and contributed 9.7 billion Rupees (47% more than 1993), the service sales tax, which contributed 32.3 billion Rupees (9% more than 1993), and the tobacco tax, which was also increased during 1994, and contributed 7.9 billion Rupees (15% more than 1993).

Current expenditures in 1994 amounted to 127.1 billion Rupees (24% increase over the previous year). Of the expenditures 27.4 billion Rupees were for defense expenses (approximately US$ 500 million). In addition, interest on loans to cover the fiscal debt reached 38 billion Rupees. Finally, transfer payments increased including pensions, for which an emergency allotment was made in May of 1994, and a variety of other welfare payments. As a result, transfer payments reached 28.3 billion Rupees (27% increase over the previous year). Defense, interest payments and welfare expenditures amounted to 74% of current account expenditures (See Table 2.2-4). Total capital expenditures and net borrowings during 1994 amounted to 40.7 billion Rupees (7% increase over the previous year).

Investment in infrastructure amounted to 29.3 billion Rupees, or 72% of total public investment. Sri Lanka made major increases in energy, water supply, sewage, and port service investments. Nevertheless, Sri Lanka has reduced public investment over the last several years, owing to fiscal constraints. From 1984 through 1988 public investments constituted an average of 13.5% of annual GNP. This ratio fell to 10.5% in 1989, and by 1994 public investments had fallen to 7% of GDP.

In 1994 the Sri Lanka's fiscal deficit (including international assistance and borrowings) was 49.5 billion Rupees (45% increase over the previous year). 11.8 billion Rupees of the deficit was financed through foreign debt, and 37.7 billion Rupees was financed through domestic debt.

2.2.3 Balance of Payments

As indicated in Table 2.2-5, Sri Lankan balance of payments position declined markedly during 1994, owing to increased demand for imports, worsening trade situations, and reduced capital inflows. As a result, the country recorded a current account deficit of 37.8 billion Rupees (double the corresponding

figure for the previous year). Sri Lankan trade deficit for 1994 amounted to 77.6 billion Rupees (40% increase over the previous year). The country has had recurring current account deficits, and trade deficits, for more than 10 years. Although in recent years exports have increased steadily (at an average rate of 23.5% over the past three years), imports have also increased (at an average rate of 23.4% over the past three years). Nevertheless, the country's service account has improved, as a result of revenues from port facilities, transport, insurance and travel. There have also been considerable outflows from travel, and payments of profits, dividends and interest. Transfer payments have continued to record surpluses from year to year, in the form of remittances from overseas workers mainly in the Middle East (35.3 billion Rupees in 1994, with 132,000 individuals covered under employment guarantees by licensed brokers), and international assistance.

Sri Lankan capital account fell during 1994 against the relevant figures for the preceding year, both for private direct investment and private investment in securities. This drop was caused by political instability during the general elections and presidential elections, and poor performance at the macro-economic level. A further contributing factor was the reduction in the spread between interest rates available in Sri Lanka and interest rates available on the international market. Although private long term capital investment recorded a (net) increase, this was due to the debt-equity arrangement for international financing of aircraft purchases under the Air Lanka restructuring plan, and for the BOI plan, which was a bus assembly plan involving government assistance. The (net) reduction in the government long term capital account was due to reduced credits from foreign countries.

In March of 1994 the government removed all restrictions on processing the current account, in order for Sri Lanka to meet its obligation as an Article 8 country under the IMF Convention. Sri Lanka now permits free conversion of the Sri Lanka Rupee, which is a major advance in the country's progressing liberalization measures. While Sri Lanka has foreign assets sufficient to cover almost six months in imports, the country's worsening international balance in 1994 gives a clear indication of the need for macro-economic stability, through well thought out financial policies, both because of the adverse effect on the current account caused by increased import demand and demand for services, and in order to promote capital inflows, within a liberalized economy.

2.2.4 External Debt

Unpaid debt in 1994 reached 434.9 billion Rupees (an increase of 15% over the preceding year), or approximately US$ 8.7 billion. Payments on debt amounted to 26.3 billion Rupees (an increase of 9% over the preceding year), or approximately US$ 500 million (See Table 2.2-9). Although the debt burden increased, revenues from commodity exports and services also increased. As a result the debt service ratio fell to 13.0%.

2.2.5 Industry

(1) Agriculture

During 1993 the agriculture sector staged a strong comeback from the poor harvest in 1992 (See Table 2.2-1). The country enjoyed good weather in 1994, and rice and tea production reached all time highs (See Table 2.2-10). A rice crop of 2.68 million tons was harvested (4% over the previous year's harvest), exceeding the previous record in 1985 by 23,000 tons. Tea production reached 242,000 tons (4% more than the previous year), rubber production reached 105,000 tons (10% more than the previous year). In

addition, 594,000 tons of sugar cane were harvested (4% less than the previous year), and 2,610 million coconuts were produced (26% more than the previous year), which was the largest coconut harvest in eight years. Other harvests for food consumption and for export were also plentiful.

Agriculture constituted 18% of the value added for Sri Lankan GDP in 1994 (representing real growth of 3%). According to labor statistics of 1994, agriculture, forestry and fisheries accounted for 40% of Sri Lankan work force (See Table 2.2-14). Thus agriculture remains the main pillar of the Sri Lankan economy.

According to Sri Lankan National Fertilizer Bureau, total fertilizer consumption during 1994 amounted to 540,000 tons (a decline of 1% against the previous year). Rice production accounted for 50% of the fertilizer used (267,000 tons), while 131,000 tons of fertilizer was used in the tea production. In October of 1994 the National Fertilizer Bureau reintroduced fertilizer subsidies, for the first time in five years.

(2) Manufacturing

In 1994 value added production from the manufacturing sector occupied 20% of the Sri Lankan GDP (See Table 2.2-1), with a real growth rate of 9% over the previous year, and nominal growth of 15%. Manufacturing accounts for around 13% of the Sri Lankan total labor force (See Table 2.2-14). With real growth of 11% per year, private sector manufacturing has proven to be the driving force for growth in manufacturing. While public sector manufacturing accounted for 11% of value added in the manufacturing sector, this represents a real decline of 5% against the same figure for the previous year, resulting from the privatization of formerly government owned cement and ceramics companies. Ceylon Petroleum now accounts for 78% of the production activities of government industry. In 1994, production increased in all manufacturing sectors. Most of Sri Lanka's export oriented companies are in the apparel industry, according to government sources, and as of the year end of 1994 there were 687 apparel companies employing 225,000 individuals. Apparel exports in 1994 amounted to 68.9 billion Rupees, constituting 44% of total exports.

The Sri Lankan government has introduced industrial diversification programs in order to avoid over-concentration of industry within the Colombo metropolitan area. The government is also examining promotion of industrial infrastructure improvements by region. In April of 1994, the government announced the fourth investment promotion zone in Pallekele within the Central Province. The government has begun programs to establish industrial promotion parks in numerous regions within the country, in cooperation with local private investors, and foreign investors. In line with the government's privatization plan, the government has sold 90% of the shares of its fertilizer company and lubrication oil company to the general public. From April of 1994, the corporate tax rates were reduced from 40% to 35% in order to promote new investment. At the same time, the tax holiday previously afforded to BOI companies was replaced with a special 15% tax rate. In addition, the Science and Technology Development Law was approved by the cabinet in May of 1994, with the intention to promote the use of science and technology in industrial fields.

2.2.6 Trade

As can be seen in Table 2.2-6, exports for 1994 amounted to 158.6 billion Rupees (an increase of 15% over 1993). Agricultural exports amounted to 34.7 billion Rupees (10% increase over the previous term). Tea exports constituted 60% of agricultural exports. Although Sri Lankan tea harvest in 1994 was the

largest in its history, unit prices for exports fell by four percent as a result of increased global supplies, and falling demand. For this reason, tea exports rose by only five percent over the previous year, to 21 billion Rupees.

Rubber exports remained relatively constant in volume terms. In monetary terms, however, rubber exports increased by 16%, to 3.6 billion Rupees, owing to higher prices for natural rubber resulting from reduced synthetic rubber production in Russia. Coconut exports increased both in volume and in revenues, owing to favorable weather conditions, with exports reaching 3.8 billion Rupees (35% increase over the previous year). Exports of manufactured products reached 116.7 billion Rupees (an increase of 16% over 1993), constituting 74% of the total exports. Within manufactured products, woven items and apparel exports reached 76.6 billion Rupees (an increase of 12% over 1993), constituting 48% of total exports. Growth in this sector was held down by a shift towards low priced apparel, and uncertainty concerning the US export quota for woven items. Of total exports for woven items and apparel, an estimated 60 - 70% came from operations by foreign affiliated companies in Sri Lanka. The USA and the EEC accounted for 92% of apparel exports. Finally, jewelry exports amounted to 3.9 billion Rupees, or three percent of total exports.

Imports during 1994 reached 236 billion Rupees (16% increase over 1993). Imports of consumer products amounted to 46 billion Rupees (23% increase over 1993), or 20% of total imports. Mid-stream products amounted to 120 billion Rupees (15% increase over 1993), or 51% of total imports, and investment products amounted to 67.5 billion Rupees (34% increase over 1993), or 29% of total imports. Rice imports fell to 60,000 tons (compared to 210,000 tons during 1993) as a result of the domestic bumper crop. Import prices for wheat fell 18% against 1993, and Sri Lanka imported 820,000 tons of wheat, for an import price of 5.2 billion Rupees. Crude petroleum prices fell 10%, to 16.3 dollars per barrel (against 17.5 dollars per barrel in 1993), and Sri Lanka imported 1.9 million tons of crude oil, 290,000 tons of petroleum products, and 50,000 tons of LPG, with total petroleum imports amounting to 14.6 billion Rupees (2% decline from 1993). For imports of transportation equipment, 11.3 billion Rupees were spent to purchase two aircraft under the Air Lanka restructuring plan.

The USA was Sri Lanka's largest export market during 1994, and accounted for 35% of the country's exports, or 55.1 billion Rupees. This was followed by the UK and Germany. Sri Lankan largest source of imports was Japan at 26 billion Rupees, followed by India, Korea and Hong Kong (Refer to Table 2.2-7).

Sri Lanka had a trade deficit during 1994 of 77.5 billion Rupees (an increase of 40% over 1993). The country has run recurring trade deficits for more than 10 years.

Sri Lankan exports to Japan during 1994 increased by 12% over 1993, to 189 million dollars (See Table 2.2-8). The main exports included prawns, tea, jewelry, textile products and dolls. Imports from Japan increased by 17% over 1993, to 455 million dollars. Sri Lankan main imports from Japan included automobiles, general machinery, electrical equipment and woven fabrics. Sri Lanka had a bilateral trade deficit with Japan of 266 million dollars. The country has been benefited by Japanese economic assistance to cover its recurring bilateral trade deficits.

Sri Lanka has adopted a trade policy of export promotion, focusing on free trade. In March of 1994, the country formally accepted its obligations under Article 8 of the IMF Convention. In addition, Sri Lanka

reaffirmed its acceptance of free and multilateral trade in conformance with the final resolution of the Uruguay Round, and the World Trade Organization (WTO) Convention.

2.2.7 Foreign Investment

During 1994, Sri Lankan Board of Investment (BOI) approved 291 projects under Board of Investment Law Article 17 (special incentive plan). Estimated investments for approved projects amounted to 43.3 billion Rupees, with 57% of this total to be supplied from domestic capital. Foreign investors include entities from Japan, Korea, Taiwan, Germany, Kuwait, France, Malaysia, Singapore, Australia, the UK, Italy, the USA, Thailand, India, etc. Projects approved in 1994 include rubber products, wooden toys, ceramic elephants, gas cylinders, glass products, sugar pickled fruits, processed fruit products, bottled pure water and silica quartz. Sri Lanka's Board of Investment has engaged in investment promotion in Malaysia, Singapore, Japan, Korea, South Africa and the UK. The agency has also conducted seminars in Sri Lanka for the purpose of promoting investment in electronics and agriculture.

The BOI has approved 1,482 permits as of the year end of 1994. Out of these permits, agreement has been reached with the BOI to commence operations for 993 projects. As of the year end of 1994, 449 companies had invested a total of 47 billion Rupees (Table 2.2-16). Foreign investment accounted for 28.2 billion Rupees of this investment (approximately US$ 600 million, or 60% of total investment). By industry, foreign sources invested 6.6 billion Rupees into woven products, apparel, and leather products (23% of foreign investment), 3.9 billion Rupees into chemical, petroleum, coal, rubber and plastic products (14% of foreign investment), and 14 billion Rupees into services (49% of foreign investment). According to statistics from Japan's Ministry of Finance, cumulative direct Japanese investment into Sri Lanka as of March 1992 stood at 121 million US dollars, for 133 projects.

As of the year end of 1994, 206,000 individuals were employed by BOI permit companies (an increase of 14% over the previous year), and these companies yielded exports of 86.8 billion Rupees (an increase of 13% over the previous year) (See Table 2.2-17). By industry, 144,000 individuals were employed in woven products, apparel and leather products (an increase of 13% over the previous year, constituting 70% of total employment by BOI permit companies), with export earnings amounting to 60.2 billion Rupees (an increase of 6% over the previous year, or 70% of total exports by BOI permit companies). Companies included in the "200 Apparel Factories Project" accounted for 71,000 of these employees. Other industries with export growth included chemical and plastic products, non-metallic mineral products, foodstuffs and beverages.

2.2.8 Foreign Assistance

According to Sri Lankan government statistics, foreign assistance to Sri Lanka during 1994 amounted to US$ 400 million, in dollar terms (See Table 2.2-18). Loans accounted for 60% of this total, and grants accounted for 40%. The grant equivalent amount of 8.2 billion Rupees matches the figures for subsidies to government income entered into the financial totals for the Sri Lankan government (See Table 2.2-3). According to DAC statistics from the OECD, the government of Sri Lanka received US$ 890 million in governmental development assistance during 1991, and US$ 644 million in 1992. Japan was the largest source of this foreign assistance (See Table 2.2-19). As of the year end of 1993, cumulative Japanese government aid to the government of Sri Lanka amounted to ¥116 billion in grant capital assistance, and ¥331.6 billion for loans, for a total of ¥447.6 billion (See Table 2.2-20).

2.2.9 Infrastructure

(1) Electricity

Summary of the electric sector of the recent years is presented in Table 2.2-21. As for details of the existing facilities for supply of electric power, reference is made to Chapter 3.

(2) Telephones

During 1994, Sri Lanka increased the number of its telephone lines to 180,000 lines. World Bank funding was used to add an additional 14,800 lines in the Colombo region. While in 1993 there were 0.9 telephones per 100 individuals, this rose to 1.01 in 1994. Demand for telephones increased by 30% in 1994, and the waiting list for telephones increased by 62,000 over 1993, to 186,000. In addition, 10,000 mobile telephones have been supplied.

(3) Roads

During 1994 the Road Development Authority (RDA) maintained 11,076 kilometers of A-Class and B-Class highways (main highways and major roads), and 3,760 bridges. During 1994 the RDA spent 2.9 billion Rupees on building, improving and repairing Sri Lankan road network, and spent 200 million Rupees on maintenance.

(4) Railways

In 1994 Sri Lanka had a total of 1,632 kilometers of railways in operation. The passenger transport rose slightly, while the freight transport declined. Sri Lankan railways were operated at a deficit during the year, as revenue amounted to 900 million Rupees, while expenses reached 1.7 billion Rupees, owing to high costs, including wage increases, repair and maintenance.

2.2.10 Economic Outlook for 1995

Despite the economic ravages due to the civil war, Sri Lankan economy continued its growth strongly in 1995. The Central Bank expected GDP to expand 5.5% in 1995, the same as in 1994.

Thanks to good weather, higher fertilizer use and improved plantation management, agricultural output in 1995 was expected to exceed even the record levels of 1994. Through October, tea production was ahead of the year-earlier level. The output of rubber, whose price experienced unprecedented increases during the year, was expected to grow 4.8%; coconut production 10%. In real terms, the government expected plantation crops to grow 5.6% in 1995.

The Central Bank estimated 1995's performance of major economic indicators in comparison with 1994's as follows:

(1) Exchange Rate

Sri Lanka Rupee depreciated to SLRs. 53.39 per dollar from SLRs. 49.98 per dollar a year ago.

(2) Interest Rate

Prime lending rate (PLR) increased from 17.5% (a year ago) to 19.5%.

(3) Price Change

The rate of inflation as indicated by Colombo Consumer's Price Index (CCPI) was 7.7% in December 1995 as against 8.4% a year ago. Greater Colombo Consumer's Price Index (GCPI) showed an annual average increase of 3.8% in December 1995 (4.8% a year ago), while Wholesale Price Index (WPI) showed an average increase of 6.5% in October 1995 (5.6% a year ago).

(4) Industry

Industrial exports increased by 26% during January - November 1995. Textile and apparel exports (64% of the industrial exports) have risen by 25% during the period.

(5) External Assets

Sri Lankan external assets declined by $ 50 million from $ 2,532 million (end-November 1994) to $ 2,482 million (end-November 1995). The official reserves declined by $ 14 million from $ 1,997 million to $ 1,983 million.

(6) Government Finance

Revenue and expenditure would increase by 17.7% and 26.6% respectively during the year. The total outstanding public debt would increase by 14.8% during the year.

(7) Unemployment Rate

In the second quarter of 1995 the unemployment rate has decreased to 11.9% from 13.0% a year ago.

2.2.11 Economic Policy and Development Plans

Since 1989 a liberal, open economic policy aimed at creating conditions for sustained economic growth has been introduced. Many state-owned enterprises have been privatized. Foreign exchange regulations are being lifted, with all restrictions on current transactions removed by early 1994; import controls have been reduced. The stock exchange was opened to foreign investment in 1990, initially with a 40% limit on foreign ownership for most companies, although this was later removed. Serious efforts are being made to reduce bureaucracy and curb public-sector employment. Tax reforms are in prospect. As a result of these measures, confidence in the economy has increased and economic growth accelerated. Substantial improvements in efficiency are being made which should ultimately feed into enhanced productive potential.

The latest available national development plan is a five-year public investment plan (1995-1999) published in May 1995. During the medium term of 1995-1999, the Government will pursue the objectives of accelerating economic growth and equitable distribution of the fruits of such growth among all classes of people. To achieve these objectives, a carefully planned economic strategy with the following elements will be implemented.

(a) Economic policy will be market friendly and the private sector will be encouraged to be the principal engine of growth.

(b) Overall levels of investment will be raised by creating a policy environment conducive to investment.

(c) The Government will play a supportive role, principally by strengthening its fiscal and monetary management, and improving the delivery of infrastructure and other facilities required for rapid economic growth.

(d) Policies and programs will be designed and implemented to enable agriculture, industry and services sectors to be internationally competitive.

(e) Export oriented activities will be promoted by appropriate tax, tariff, exchange rate, interest rate, and credit policies in a competitive market framework.

(f) Private investment in infrastructure will be encouraged.

(g) Public enterprise reforms will be carried forward.

The main planning indicators for the term will be as follows:

(1) The GDP will increase at an average rate of 6.9% per annum (see Table 2.2-22). The resulting per-capita income growth rate will be 5.7%.

(2) Gross domestic capital formation will be maintained at about 27% of GDP.

(3) The national savings ratio will reach an average of 22% of GDP during the coming five years.

(4) Public consumption will be reduced to about 7% of GDP.

(5) The current account deficit in the balance of payments will decline to about 4.9% of GDP in 1999 compared with 6.4% in 1995.

(6) The overall deficit in the government budget will decline from 7.5% of GDP in 1995 to 5.1% in 1999.

2.3 Power Development Policy in Energy Sector

Sri Lanka does not have a comprehensive and coherent energy policy except the nine-point energy policy guidelines adopted in 1995. Emphasis of the guidelines is on providing energy as a part of basic human needs, while minimizing the cost of the national economy. Other concerns expressed include reducing dependence on foreign energy resources, ensuring energy supply reliability and price stability, and expanding capacity to develop and manage the energy sector.

A national committee to prepare a comprehensive energy policy was set up in September, 1995 by MIPE. The committee is at present studying about specific proposals of the energy policy and is expected to consider the following energy issues as well as the Government's socio-economic plans:

(1) Program to install generating plants of short delivery time such as diesel engine, gas turbine and combined cycle sets to meet coming power supply shortage in the last 20th century.

(2) Further use of biomass without degrading forest resources and a program for reforestation and utilization of fuel wood.

(3) Integrated approach to planning and development of energy supplies to meet various demands.

(4) Pricing of petroleum products.

(5) Electrification and associated improvement of railway system as a more energy efficient and environment-friendly mode of transportation.

(6) Tolerable level of dependence on imported energy.

(7) Options for a reliable energy mix which will be economical and yet robust against external conditions.

Sri Lanka has a certain amount of hydro energy potential along major rivers flowing from the south-central mountains. The total available hydro power potential of the country is estimated to be around 2,000 MW according to hydro power potential study in 1989. While, no proven reserves of fossil fuels, such as coal, oil, natural gas , or atomic energy. Therefore, for operating any type of thermal power station fuel must be imported with precious foreign exchange.

Under such situation, it became a government policy to utilize the hydro power resources, indigenous and renewable energy resources, for power generation to the maximum possible extent.

Table 2.2 - 1 Gross National Product

	Unit	1991	1992	1993	1994 (Provisional)		1995
					Amount	Share in GNP %	
1. Gross National Product at Current Factor Prices	Rs.Mn.	337,399	386,999	453,092	523,300		
(Change Over Preceding Year)	%	(16.1)	(14.7)	(17.1)	(15.5)		
2. Net Factor Income From Abroad	Rs.Mn.	▲ 7,367	▲ 7,820	▲ 5,757	▲ 8,028		
3. GNP	Rs.Mn.	330,032	379,179	447,113	515,272		
(Change Over Preceding Year)	%	(16.2)	(14.9)	(17.9)	(15.2)		
GNP at Constant Factor Cost (1982)							
1. Agriculture,Forestry & Fishing	Rs.Mn.	30,570	30,090	31,554	32,593	20.8	
(Change Over Preceding Year)	%	(1.9)	(▲ 1.6)	(4.9)	(3.3)		
1.1 Agriculture	Rs.Mn.	25,941	25,316	26,592	27,596	17.6	
Tea	Rs.Mn.	3,100	2,303	2,985	3,116		
Rubber	Rs.Mn.	655	669	681	688		
Coconut	Rs.Mn.	2,827	2,971	2,799	3,376		
Paddy	Rs.Mn.	6,002	5,882	6,447	6,750		
Other	Rs.Mn.	13,357	13,491	13,680	13,666		
1.2 Forestry	Rs.Mn.	2,107	2,149	2,151	2,147		
1.3 Fishing	Rs.Mn.	2,522	2,625	2,811	2,850		
2. Mining & Quarrying	Rs.Mn.	3,511	3,300	3,693	3,915	2.5	
(Change Over Proceding Year)	%	(▲ 10.3)	(▲ 6.0)	(11.9)	(6.0)		
3. Manufacturing	Rs.Mn.	23,949	26,059	28,806	31,418	20.1	
(Change Over Proceding Year)	%	6.8	8.8	10.5	9.1		
3.1 Processing of Tea, Rubber	Rs.Mn.	3,332	2,912	3,157	3,567	2.3	
& Coconut Kennel Products	%	(▲ 5.6)	(▲ 12.6)	(8.4)	(13.0)		
3.2 Factory Industrial	Rs.Mn.	18,708	21,140	23,529	25,600	16.3	
(Change Over Proceding Year)	%	(9.5)	(13.0)	(11.3)	(8.8)		
3.3 Small Industry	Rs.Mn.	1,065	1,150	1,208	1,277	0.8	
3.4 Others	Rs.Mn.	844	857	912	974	0.6	
4. Construction	Rs.Mn.	9,033	9,765	10,400	11,024	7.0	
5. Electricity,Gas,Water & Sanitary Services	Rs.Mn.	1,800	1,897	2,125	2,335	1.5	
6. Transport Storage and Communication	Rs.Mn.	15,534	16,606	17,287	17,823	11.4	
(Change Over Proceding Year)	%	(7.8)	(6.9)	(4.1)	(3.1)		
7. Wholesale and Retail Trade	Rs.Mn.	28,556	30,074	32,584	34,667	22.1	
(Change Over Proceding Year)	%	(7.8)	(5.3)	(8.3)	(6.4)		
8. Banking ,Insurance and Real Estate	Rs.Mn.	6,831	7,241	8,023	8,785	5.6	
9. Ownership of Dwellings	Rs.Mn.	3,761	3,795	3,841	3,887	2.6	
10. Public Administration and Defence	Rs.Mn.	6,304	6,449	6,642	6,848	4.4	
11. Other Services	Rs.Mn.	5,355	5,714	5,828	5,974	4.1	
12. GDP	Rs.Mn.	135,204	140,990	150,783	159,269	101.7	
(Change Over Proceding Year)	%	(4.6)	(4.3)	(6.9)	(5.6)		(5.5)
13. Net Factor Income From Abroad	Rs.Mn.	▲ 2,990	▲ 2,916	▲ 2,039	▲ 2,607		
14. GNP	Rs.Mn.	132,214	138,074	148,744	156,662	100.0	
(Change Over Proceding Year)	%	(4.6)	(4.4)	(7.7)	(5.3)		

Source : Central Bank of Sri Lanka, Annual Report 1994

Table 2.2 - 2 Economic Indicators

	Unit	1991	1992	1993	1994	1995
1. GNP per Capital Current Market Prices	Rs.	21,410	24,379	28,357	32,231	
(Change over preceeding year)	%		(13.9)	(16.3)	(13.7)	
2. GNP per Capital Current Market Prices	US$	518	556	588	652	
3. GNP per Capital Current Factor Cost Prices	Rs.	19,136	21,786	25,377	28,843	
4. GNP per Capital Current Factor Cost Prices	US$	463	497	526	583	
5. Ratio of Gross Domestic Capital Formation to GDP	%	22.8	24.3	25.6	27.0	
6. Ratio of Domestic Savings to GDP	%	12.8	15.0	16.0	15.2	
7. Ratio of National Savings to GDP	%	15.4	17.9	20.3	19.1	
8. Change in Money Supply (M1)	%	18.0	7.3	19.0	19.0	
9. Change in Money Supply (M2)	%	23.2	16.6	23.5	19.6	
10. Colombo Consumer Price Index Change	%	12.2	11.4	11.7	8.4	7.7
11. Wholesale Price Index Change	%	9.2	8.8	7.6	5.0	
12. Mid - year Population	1,000 Persons	17,247	17,405	17,619	17,865	18,127
13. Population Growth Rate	%	1.1	1.0	1.2	1.4	1.5
14. Total resources	Rs. Mn.		599,791	716,304	843,397	
1) GDP at Current Market Prices	Rs. Mn.	372,345	425,283	499,760	578,795	
2) Imports			174,508	216,544	264,602	
15. Utilization	Rs. Mn.		599,791	716,304	843,397	
1) Consumption	Rs. Mn.	324,847	361,438	419,576	491,032	
2) Gross Domestic Fixed Capital Formation	Rs. Mn.	85,156	100,039	126,070	154,310	
- Government	Rs. Mn.		13,632	20,765	18,455	
- Private Sector & Public Corporation	Rs. Mn.		86,407	105,305	135,855	
3) Changes in Stocks	Rs. Mn.		3,200	1,800	2,250	
4) Exports	Rs. Mn.		135,114	168,858	195,805	
16. Foreign Exchange Rate (year-end)	Rs.per US$	42.58	46.00	49.56	49.98	53.90
17. Unemployment Ratio						
- Male	%	9.6	10.1	10.2	9.9*	
- Female	%	21.2	19.8	21.0	21.3*	
- Total	%	13.8	13.3	13.8	13.7*	

Source : Central Bank of Sri Lanka, Annual Report 1994
Economic & Social Statistics of Sri Lanka 1994, Central Bank of Sri Lanka
(Note) : * as of 3rd Quarter of 1994.

Table 2.2 - 3 Government Fiscal Operation

Unit :Rs.Mn.

	1991	1992	1993	1994 (Provisional)	1995 (Estimated)
1. Government Revenue	76,179	85,781	98,339	110,038	137,110
1.1 Tax Revenue	68,157	76,353	85,891	99,417	121,324
1) Tax on Income and Profits	9,722	10,967	12,543	15,277	15,420
2) Tax on Property	3,541	3,597	3,493	4,386	4,667
3) Tax on Goods and Services	32,107	38,158	47,963	56,685	72,495
4) Tax on Forign Trade	19,754	21,640	20,819	22,598	28,742
5) Tax on Treasury Bills (Central Bank)	3,033	1,990	1,073	471	-
1.2 Non -Tax Revenue	8,022	9,428	12,448	10,621	15,786
1) Property Income	5,964	6,262	8,154	7,459	10,622
2) Fees & Admin. Charges	917	1,225	1,303	1,430	2,409
3) Others	1,141	1,941	2,991	1,732	2,755
2. Grants (Foreign Aid)	7,870	8,280	8,025	8,257	8,930
3. Total of 1 and 2	84,049	94,061	106,364	118,295	146,040
4. Government Expenditure					
4.1 Current Expenditure	83,756	89,638	102,288	127,084	133,424
1) Expenditure on Goods and Services	35,848	39,691	44,895	54,700	55,280
Salaries and Wages	17,985	20,793	26,332	29,309	32,898
Other Purchases of Goods and Services	17,863	18,898	18,563	25,391	22,382
Interest Payments	22,073	25,940	30,203	38,031	37,204
Domestic	17,960	21,201	25,101	32,520	30,843
Forign	4,113	4,739	5,102	5,511	6,361
3) Transfer Payments(Public Enterprises,etc)	25,835	24,007	27,190	34,353	40,940
4.2 Capital Expenditure	25,305	24,949	33,662	30,391	42,668
1) Acquisition of Fixed Capital Assets	14,072	12,604	19,719	16,747	24,894
2) Capital Transfers(Public Enterprises)	11,233	12,345	13,943	13,644	17,774
4.3 Lending minus Repayments	10,467	2,386	4,510	10,293	10,503
5. Total of 4,2,&4,3	35,772	27,335	38,172	40,684	53,171
6. Total of 4,1,4,2 & 4,3	119,528	116,973	140,460	167,768	186,595
7. Budget Deficit (before Grants)	▲ 43,348	▲ 31,192	▲ 42,121	▲ 57,730	▲ 49,485
8. Budget Deficit (after Grants)	▲ 35,478	▲ 22,912	▲ 34,096	▲ 49,473	▲ 40,555
9. Financing of Budget Deficit					
9.1 Foreign Financing (Net)	19,329	7,361	9,855	11,778	18,382
9.2 Domestic Financing (Net)	16,149	15,552	24,241	37,696	22,173

Table 2.2 - 4 Functional Classification of Government Current Expenditure

Unit :Rs.Mn.

	1991	1992	1993	1994 (Provisional)	1995 (Estimated)
Civil Administration	5,612	7,099	7,405	4,637	10,182
Defence	10,317	12,876	15,413	19,415	16,750
Public Order & Security	3,882	4,478	4,746	6,392	6,118
Education	7,951	10,533	11,225	14,836	12,732
Health	4,110	4,518	5,711	7,666	8,627
Welfare	19,266	17,378	20,255	24,560	30,926
Agriculture & Irrigation	912	1,398	1,483	2,506	2,968
Energy and Water Supply	659	133	93	518	997
Transport and Communication	1,308	1,208	1,346	2,024	1,517
Interest Payments	22,073	25,940	30,203	38,031	37,204
Total	83,756	89,639	102,288	127,084	133,424

Source : Central Bank of Sri Lanka, Annual Report 1994

Table 2.2 - 5 Balance of Payments

Unit : Rs.Mn.

	1991	1992	1993	1994	1995
1. Merchandise	▲ 41,252	▲ 45,785	▲ 55,486	▲ 77,644	
1.1 Exports (FOB)	84,379	107,855	138,174	158,554	
1.2 Imports (CIF)	125,631	153,640	193,660	236,198	
2. Services	▲ 3,773	▲ 1,430	1,821	820	
2.1 Receipts	24,897	30,256	36,050	44,363	
2.2 Payments	28,670	31,686	34,229	43,543	
3. Transfers Capital (Net)	25,030	28,280	34,839	39,057	
3.1 Private (Net)	16,623	20,253	27,090	30,989	
3.2 Official (Net)	8,407	8,027	7,749	8,069	
4. Current Account Balance	▲ 19,995	▲ 18,935	▲ 18,825	▲ 37,767	
5. Non - Monetary Capital (Net)	27,172	23,450	41,066	48,058	
5.1 Direct Investment	2,633	5,315	9,107	7,815	
5.2 Portfolio Investment	1,329	1,122	3,272	1,334	
5.3 Private Long - Term	▲ 1,005	1,162	8,998	15,628	
5.4 Private Short - Term	2,105	5,652	7,110	12,933	
5.5 Govt. Long - Term	20,850	11,495	12,579	10,348	
5.6 Govt. Short - Term	1,260	▲ 1,295	-	-	
6. Errors and Omissions	2,729	3,399	3,328	8,255	
7. Valuvation Adjustments	235	1,555	▲ 1,420	▲ 1,380	
8. Overall Balance	10,140	9,469	24,149	17,166	
9. External Assets	49,223	66,236	105,258	130,340	
10. Foreign Currency Reserve (excl. gold)	-	927	1,629	-	
11. Private Remittances	18,311	24,037	30,592	35,345	
11.1 Middle East	9,515	13,186	16,932	20,385	
11.2 EEC	2,290	3,357	4,575	5,183	
11.3 Other Europe	444	995	1,387	1,756	
11.4 North America	3,767	3,443	3,693	3,196	
11.5 South East Asia	967	2,001	2,359	2,602	

Source :Central Bank of Sri Lanka, Annual Report 1994
Economic & Social Statistics of Sri Lanka 1994, Central Bank of Sri Lanka

Table 2.2 - 6 International Trade

Unit :Rs.Mn.

	1991	1992	1993	1994		1995
				Amount	% share	
1. Exports	82,225	107,855	138,175	158,554	100	
1.1 Agricultural Products	26,537	26,504	31,618	34,692	22	
1) Tea	17,867	14,893	19,911	20,964	13	
(Q'ty, 1000 ton)	212	182	218	230		
2) Rubber	2,641	2,960	3,086	3,582	2	
(Q'ty, 1000 ton)	76	79	70	69		
3) Coconut	2,619	3,691	2,796	3,761	2	
(Q'ty, Mn.Nuts)	367	412	293	436		
1.2 Industrial Products	50,736	76,699	100,420	116,744	74	
1) Textile & Garments	33,261	53,209	68,150	76,614	48	
2) Petroleum Products	3,289	2,771	3,801	3,959	3	
1.3 Mineral Exports	2,562	2,749	3,653	4,293	3	
1) Gems		2,482	3,402	3,917	3	
2. Imports	126,643	153,555	193,550	236,030	100	
2.1 Consumer Goods	32,357	32,197	37,372	45,983	20	
1) Rice	1,589	2,852	2,386	655		
(Q'ty, 1000 ton)	133	237	209	58		
2) Sugar	5,139	4,952	5,621	8,875		
(Q'ty, 1000 ton)	358	370	394	491		
3) Milk & Milk Products	2,796	2,941	3,655	4,305		
4) Dry Fish	1,686	1,804	1,932			
(Q'ty, 1000 ton)	44	44	64			
5) Cars and Motorcycles	2,163	2,459	2,963	5,300		
(Q'ty, 1000 unit)	18,832	11,316	14,949			
6) Medicine	1,755	2,441	2,490	3,140		
2.2 Intermediate Goods	64,265	82,592	103,952	119,970	51	
1) Fertilizer	2,430	2,366	3,108	3,885	2	
(Q'ty, 1000 ton)	359	339	465	427		
2) Petroleum	12,887	13,938	14,920	14,641	6	
(Q'ty, 1000 ton)	1,626	1,297	1,791	1,898		
3) Wheat	3,303	4,549	5,609	5,178	2	
(Q'ty, 1000 ton)	670	709	771	826		
4) Chemicals	3,643	4,125	5,244	5,975	3	
5) Paper & Cardboard	3,570	3,815	4,668	5,270		
6) Textile & Clothing	20,611	33,552	41,740	51,299	22	
2.3 Investment Goods	29,792	37,294	50,508	67,524	29	
1) Machinery Equipment	11,881	17,098	22,377	27,635	12	
2) Transport Equipment	7,607	7,889	15,012	22,425	10	
3) Building Materials	6,840	7,936	9,342	11,898	5	
3. Trade Balance	▲ 44,418	▲ 45,700	▲ 55,375	▲ 77,476		

Source :Central Bank of Sri Lanka, Annual Report 1994

Table 2.2 - 7 Direction of Trade

Unit :Rs.Mn.

	1991	1992	1993	1994	1995
1. Export Market					
USA	23,128	36,712	48,653	55,112	
UK	5,222	7,460	9,836	14,104	
German	6,157	9,282	10,992	10,994	
Belgium - Luxembourg	3,262	5,913	8,545	9,346	
Japan	4,204	5,611	7,150	8,167	
Total (Incl. Others)	82,225	107,855	138,175	158,554	
2. Import Source					
Japan	14,828	18,215	21,870	26,021	
India	9,105	13,230	15,569	19,985	
Hong-Kong	8,792	10,561	15,098	15,644	
South Korea	9,062	9,182	12,642	16,123	
USA	7,221	6,985	6,343	14,070	
Total (Incl. Others)	126,643	153,555	193,550	236,030	

Source :Central Bank of Sri Lanka, Annual Report 1994

Table 2.2 - 8 Trade With Japan

Unit :US$ Mn.

	1991	1992	1993	1994	1995
1. Export to Japan	132	151	169	189	
1.1 Food & Drinks	34	40	44	58	
- Prawn	11	11	14	26	
- Tea	18	22	17	20	
1.2 Raw Materials	13	10	12	12	
- Rubber	4	3	4	4	
- Titaninum Ore	2	1	3	2	
1.3 Processed Goods	78	94	108	113	
- Textile Products	...	15	14	...	
- Dolls	...	15	11	...	
- Jewelry	33	25	35	37	
2. Import from Japan	291	359	389	455	
2.1 Food & Drinks	2	3	2	3	
2.2 Fuel	3	3	4	4	
2.3 Textile Products	52	60	57	56	
- Woven Fabrics	38	47	44	43	
2.4 Non - Metallic Mineral Products	4	7	8	7	
2.5 Chemicals	25	29	28	21	
2.6 Metal Goods	16	19	20	25	
- Iron & Steel	8	10	10	14	
- Metal Products	7	9	9	9	
2.7 Machinery	170	217	244	318	
- General Machinery Equipment	48	59	73	94	
- Electrical Equipment	22	34	47	65	
- Automobiles (excl. parts)	75	87	99	137	
3. Trade Deficit with Japan	159	208	220	266	

Source : MITI, "White Paper on International Trade, 1995"

Table 2.2 - 9 External Debt and Debt Service Payments

Unit :Rs.Mn.

	1991	1992	1993	1994	1995
1. Total Debt	275,998	314,258	376,772	434,907	
1.2 Medium & Long - term Debt	255,798	289,679	345,083	390,285	
- Government	218,400	243,251	281,142	305,011	
- Public Corporation (w/G.G.)	8,578	11,121	16,804	28,977	
- Private Sector (w/G.G.)	7,319	8,173	9,821	11,384	
- Public Corporation (w/o G.G.)	197	151	97	30	
- Private Sector (w/o G.G)	6,867	8,784	11,566	15,417	
- Drawings	14,437	18,199	25,653	29,467	
1.3 Short - Term Debt	20,200	24,579	31,689	44,622	
2. Debt Service Payments	20,173	23,671	24,066	26,333	
- Amortization	11,353	14,329	14,317	14,892	
- Interest Payments	8,820	9,342	9,750	11,440	
3. Earnings from Merchandise Exports & Services	109,275	138,111	174,224	202,917	
4. Debt Service Ratio	19	17	14	13	

Note : G.G.means Government Guarantee.

Table 2.2 - 10 Agricultural Production

Unit : 1000 ton

	1991	1992	1993	1994 (Provisional)	1995
Paddy Rice	2,389	2,340	2,570	2,684	
Tea	241	179	232	242	
Rubber	104	106	104	105	
Coconut (Mn. Nuts)	2,184	2,296	2,200	2,628	
Sugar Cane	...	...	618	594	
Sugar	66	60	69	72	

Table 2.2 - 11 Livestock and Fish

Unit : 1000 head

	1991	1992	1993	1994 (Provisional)	1995
Cattle	1,477	1,604	1,704	1,706	
Buffaloes	825	897	794	798	
Goats	460	528	583	590	
Sheep	20	22	20	20	
Pigs	84	91	90	94	
Poultry	8,261	8,852	9,261		
Fish Production (Unit : 1000 ton)	198	206	221	224	

Table 2.2 - 12 Mineral Production

Unit : ton

	1991	1992	1993	1994	1995
Graphite	6381	3307	2946		
Ilmenite	60861	33783	70914		
Rutile	3085	2741	2643		

Source : Central Bank of Sri Lanka, Annual Report 1994

Table 2.2 - 13 Industrial Production

Unit : 1,000 ton

	1991	1992	1993	1994	1995
1. Textiles					
1.1 Yarn	20	22	24		
1.2 Fabric	181	187	211		
1.3 Garment (Export, Mn.Pcs.)	242	316	363		
2. Cement	619	653	651		
3. Phosphatic Fertilizer	20	26	30		
4. Sugar	66	60	69		
5. Steel (Rolling Mill)	48	54	40		
6. Paper & Paper Products	23	26	36		
7. Truck Tyre (1000 pcs)	224	73	27		
8. Passenger Car Tyre (1000 pcs)	64	177	67		

Source : Ecomomic & Social Statics of Sri Lanka 1994, Central Bank of Sri Lanka

Value Added in Industry (Current Prices)

Unit : Rs.Mn.

	1991	1992	1993	1994		1995
				Amount	% share	
1. Food, Beverages and Tobacco	15,070	18,668	21,704	24,373	35	
2. Textile Wearing Appard and Leather Products	8,542	14,630	18,994	20,660	30	
3. Wood and Wood Products	571	677	831	1,081	2	
4. Paper and Paper Products	1,167	1,397	1,912	2,301	3	
5. Chemicals, Petroleum, Coal, Rubber and Plastic Products	3,199	3,989	4,723	5,758	8	
6. Non-metalic Mineral Products	4,905	5,918	7,163	9,272	13	
7. Basic Metal Products	248	263	279	356		
8. Fabricated Metal Products, Machinery and Transport Equipment.	3,247	3,629	3,608	4,344	6	
9. Others Manufactured Products	1,092	1,196	1,532	1,838	3	
Total	38,041	50,367	60,746	69,983	100	

Source : Central Bank of Sri Lanka, Annual Report 1994

Table 2.2 - 14 Percentage Distribution of Employed Population (by Industrial Group)

	1991	1992	1993	1994 (3rd Quatr.)	1995
Agriculture, Livestock & Fisheries	41.6	46.1	38.5	34.6	
Mining & Quarrying	0.9	1.0	2.2	0.6	
Manufacturing	13.4	12.3	13.2	14.5	
Electricity & Gas	0.5	0.4	0.6	0.5	
Construction	3.9	4.8	4.9	4.9	
Trade & Hotels	11.5	10.3	11.0	12.1	
Transport & Communication	5.0	4.5	4.1	5.6	
Insurance & Real Estate	1.9	0.8	1.4	1.2	
Services	14.8	15.9	20.9	20.4	
Not Identified	6.5	3.9	3.2	5.6	

Source : Economic & Social Statics of Sri Lanka 1994, Central Bank of Sri Lanka

Public Sector Employment

Unit : Persons

	1992	1993	1994	1995
Central Government, Provincial Councils & Local Authorities	653,959	676,483	699,898	
Semi Government Institutions	632,271	618,794	625,266	
Total	1,291,230	1,295,277	1,325,164	

Source : Central Bank of Sri Lanka, Annual Report 1994

Table 2.2 - 15 Labour Force and Employment

Unit :10,000 Persons

	1991	1992	1993	1994	1995
1. Total Labour Force	583	580	608	617	
2. Total Employment	494	485	526	536	
1) Agriculture, Fisheries, Mining & Quarrying	223	201	245	223	
2) Manufacturing & Utilities	64	67	70	75	
3) Construction	20	26	20	26	
4) Services	187	191	191	212	

(Note) Excluding Northern and Eastern Provinces

Source : Central Bank of Sri Lanka, Annual Report 1994

Table 2.2 - 16 Realised Investments in BOI Approved Enterprises (as of end of Dec'1994)

Category	No. of Enterprises	Foreign Investment (Rs.Mn.)	Local Investment (Rs.Mn.)	Total Investment (Rs.Mn.)
1. Textile, wearing apparel and leather products	97	6,593	1,615	8,208
2. Chemical, petroleum, coal, rubber, and plasti products	47	3,886	722	4,608
3. Non-metallic mineral products	37	862	1,328	2,190
4. Food, beverages & tobacco	29	397	480	877
5. Wood and wood products	11	331	24	356
6. Fabricated metal products, machinery and transport equipment	15	295	158	452
7. Paper & paper products	7	171	54	225
8. Other manufactured products	68	1,728	542	2,271
9. Services	138	13,975	13,798	27,772
Total	449	28,238	18,721	46,959

(Note) Projects approved under Section D of BOI Law.

Source : Board of Investment (BOI)

Table 2.2 - 17 Employment and Export Earnings of BOI Approved Projects

Category	1993		1994		1995	
	Employment (Persons)	Export Earnings (FOB Rs.Mn.)	Employment (Persons)	Export Earnings (FOB Rs.Mn.)	Employment (Persons)	Export Earnings (FOB Rs.Mn.)
1. Textile, wearing apparel and leather products	127,650	56,890	144,150	60,155		
2. Chemical petroleum, coal, rubber, and plastic products	10,350	4,114	13,400	6,206		
3. Non-metallic mineral products	7,250	3,410	8,150	4,466		
4. Food, beverages & tobacco	3,100	2,838	4,100	3,032		
5. Wood and wood products	650	145	1,050	158		
6. Fabricated metal products, machinery and transport equipment	600	297	900	311		
7. Paper & paper products	300	155	450	602		
8. Other manufactured products	21,200	7,012	23,450	8,842		
9. Services (exd Air Lanka Ltd.)	8,800	1,879	10,050	3,042		
Total	179,900	76,740	205,650	86,814		

Source : BOI

Table 2.2 - 18 Net Receipts of Foreign Assistance

Unit :US$ Mn.

	1991	1992	1993	1994 (Provisional)	1995
1. Loan	495	162	219	236	
- ADB	137	115	111	84	
- IBRD	▲ 3	▲ 3	▲ 3	▲ 3	
- IDA	174	65	112	71	
- Japan	182	15	50	128	
- USA	30	8	2	▲ 6	
- German	4	▲ 13	▲ 16	▲ 17	
- UK	2	▲ 10	▲ 9	▲ 9	
2. Grants	185	180	162	165	
- UN	5	4	-	10	
- Japan	46	46	72	52	
- USA	67	51	59	19	
- UK	3	4	1	16	
- Norway	5	10	7	9	
- Netherlands	3	15	-	9	
- Sweden	10	8	6	6	
- Finland	9	8	5	5	
3. Total	680	342	318	401	

(Note) originally shown in Rs. but converted into US$.

Source : Central Bank of Sri Lanka, Annual Report 1994

Table 2.2 - 19 Net Receipts of ODA

Unit :US$ Mn.

	1991	1992	1993	1994	1995
1. Net Receipts of ODA	890.5	644.2			
1) OPEC	▲ 2.5	▲ 3.0			
2) UN	435.5	398.3			
3) DAC Members	457.5	248.8			
- Japan	256.1	91.1			
- USA	78.0	52.0			
- UK	20.6	16.3			

Source : DAC

Table 2.2 - 20 Japan's ODA to Sri Lanka (E/N base)

Unit :Y.Mn.

	1991	1992	1993	1994	Accumulated Total
1. Grant Capital Assistance	5,255	6,927	3,500		116,058
1) General Grant	3,180	5,108	575		70,250
2) Fishery Grant	28	-	1,209		3,970
3) Culture Grant	17	-	-		422
4) KR Aid	-	-	-		2,076
5) Food Production Increase Aid	1,900	1,700	1,600		35,800
6) Debt Relief	120	104	92		3,479
7) Small-Scale Grant Aid	10	15	24		61
2. Loan Capital Assistance	33,735	-	30,550		331,601
1) Project Loan	33,735	-	30,550		237,989
2) Commodity Loan	-	-	-		93,612
Total of 1 & 2	38,990	6,927	34,050		447,659
EXIM Direct Loan	-	-	-		4,758

Source : MITI " Present Situation and Issues of Economic Coorporation, 1995"

Table 2.2 - 21 Infrastructures

(1) Electricity

	Unit	1991	1992	1993	1994	1995
1. Installed Capacity	1000 KW	1,289	1,410	1,410	1,410	
1) Hydro	1000 KW	1,017	1,137	1,137	1,137	
2) Thermal	1000 KW	272	272	272	272	
2. Units Generated	Mn. KWh	3,376	3,540	3,979	4,364	
1) Hydro	Mn. KWh	3,116	2,900	3,796	4,089	
2) Thermal	Mn. KWh	260	640	183	275	
3. Total Sales	Mn. KWh	2,662	2,916	3,270	3,582	
1) Residential	Mn. KWh	644	704	826	933	
2) Industrial	Mn. KWh	958	1,057	1,223	1,404	
3) Commercial	Mn. KWh	466	581	641	593	
4) Bulk Supply (Local Authorities)	Mn. KWh	572	545	536	612	
5) Street Lighting	Mn. KWh	22	29	43	40	

(2) Inland Telephone Service

	1991	1992	1993	1994	1995
1. No. of Telephone Lines	125,834	135,504	157,774	180,724	
- Colombo	84,883	91,023	104,630	119,430	
- Local Area	40,951	44,481	50,845	61,294	
2. New Telephone Lines Given	6,579	10,607	22,270	25,322	
3. Demand for Telephones (Nos)	187,147	231,711	281,840	366,969	
4. No. of Applicants in Waiting List	61,313	96,207	124,066	186,245	
5. Telephone Density (Telephones per 100 persons)	0.73	0.78	0.90	1.01	

(3) Transport Sector

	Unit	1991	1992	1993	1994	1995
1. Road Kilometreage						
1.1 Class A (paved, 24'-36 wide carriage way)	Km	4,116	4,216	4,225		
1.2 Class B (metalled & bitumen)	Km	6,465	6,671	6,722		
2. Railway						
2.1 Route Length (Broad Gauge)	Km	1,403	1,403	1,432	1,632	
2.2 Passenger Kilometres	Mn.	2,654	2,613	2,822	3,230	
2.3 Net Ton Kilometreage of Goods Handled	Mn.	169	177	159	151	
3. Shipping						
3.1 Vessels Arrived Colombo	No.	2,929	3,117	3,323	3,251	
3.2 Cargo Handled (Discharged)						
(1) Colombo	MT'000	7,982	8,131	9,732	10,497	
(2) Galle	MT'000	219	236	255	294	
(3) Trincomalee	MT'000	768	893	1,069	1,156	

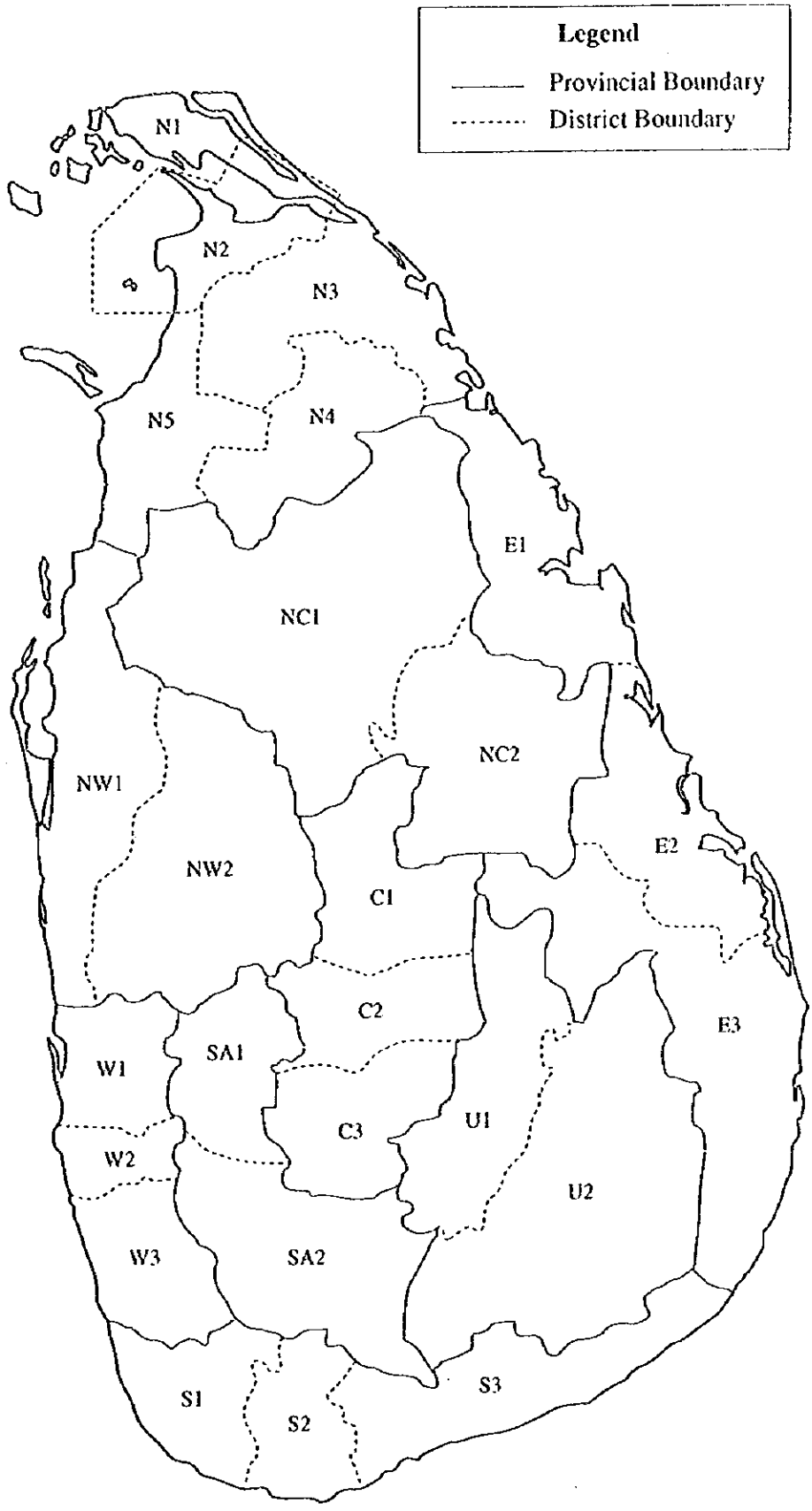
Source : Central Bank of Sri Lanka, Annual Report 1994

- Economic & Social Statistics of Sri Lanka 1994, Central Bank of Sri Lanka

Table 2.2 - 22 Growth Rates of GDP by Major Sectors at Constant Prices

	Percentage (%)						Average
	1994	1995	1996	1997	1998	1999	95 / 99
1. Plantation Agriculture	12.8	2.3	2.2	2.3	2.3	2.3	2.3
2. Other Agriculture	1.5	3.7	3.8	4.5	4.5	4.5	4.2
3. Mining, Manufacturing & Construction	6.6	8.4	9.7	10.2	10.6	11.1	10.0
4. Services	5.5	6.2	6.4	6.8	7.5	7.5	6.9
5. GDP	5.6	6.0	6.5	7.0	7.5	7.7	6.9
GDP at 1994 Constant Market Prices (Rs.Billion)	576.2	610.8	650.5	696.0	748.2	805.8	-
GDP daflator (%)	10.0	8.0	7.0	6.0	5.0	5.0	6.6

Source : Dept. of National Planning, Public Investment (1995 - 1999)



Northen
- N1 : Jaffna
- N2 : Kilinochchi
- N3 : Mullaittivu
- N4 : Vavuniya
- N5 : Mannar

North Central
- NC1 : Anuradhapura
- NC2 : Polonnaruwa

Eastern
- E1 : Trincomalee
- E2 : Batticaloa
- E3 : Ampara

North Western
- NW1 : Puttalam
- NW2 : Kurunegala

Central
- C1 : Matale
- C2 : Kandy
- C3 : Nuwara Eliya

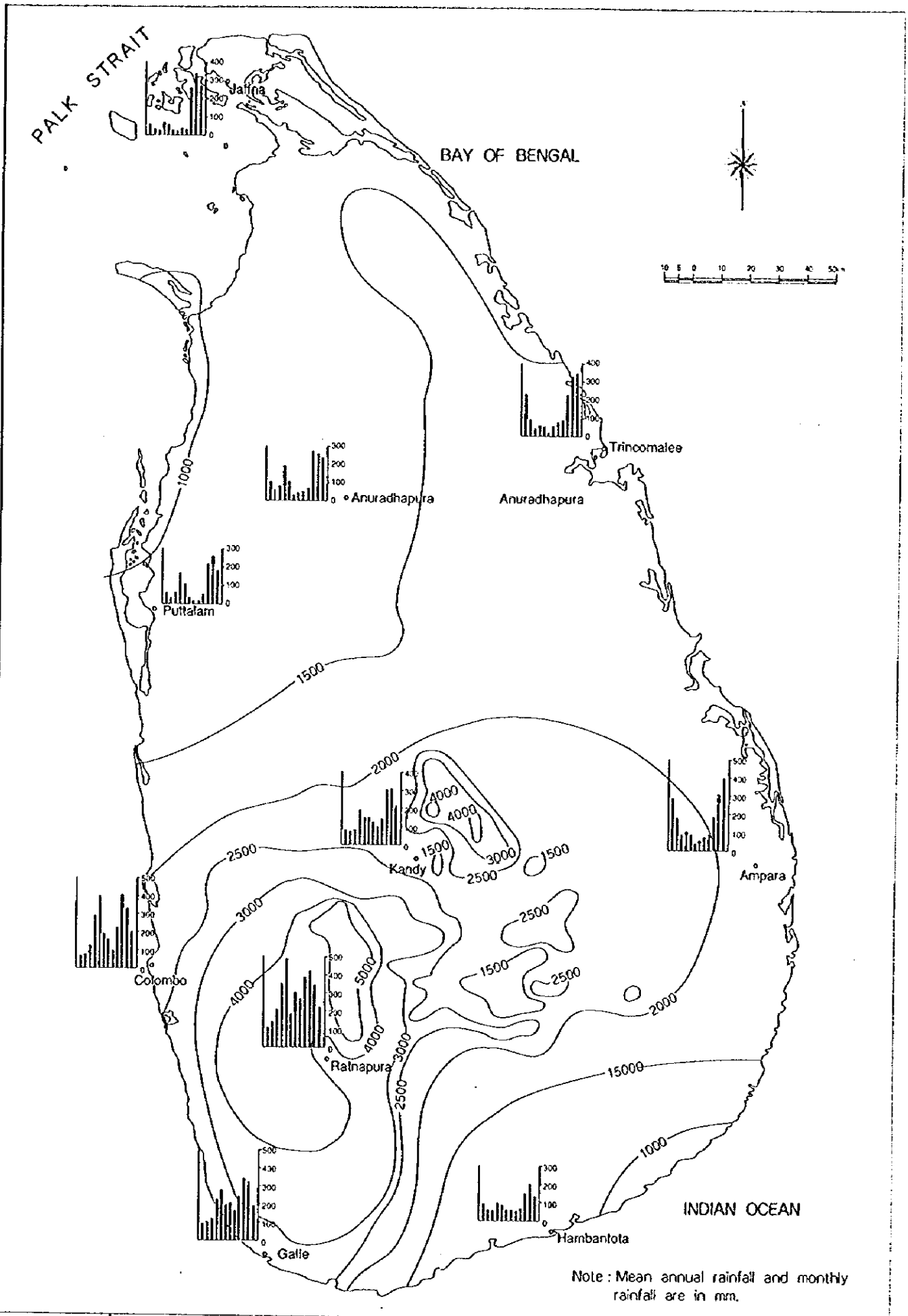
Uva
- U1 : Badulla
- U2 : Monaragala

Western
- W1 : Gampaha
- W2 : Colombo City
- W3 : Kalutara

Sabaragamuwa
- SA1 : Kegalle
- SA2 : Ratnapura
- SA3 : Kahawatta

Southern
- S1 : Galle
- S2 : Matara
- S3 : Hambantota

CEYLON ELECTRICITY BOARD	JAPAN INTERNATIONAL COOPERATION AGENCY NIPPON KOEI CO., LTD. Consulting Engineer	MASTER PLAN STUDY FOR DEVELOPMENT OF THE TRANSMISSION SYSTEM OF THE CEYLON ELECTRICITY BOARD IN THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA	TITLE Fig. 2. 1. 1 - 1 Provincial and District Boundaries



CEYLON ELECTRICITY BOARD	JAPAN INTERNATIONAL COOPERATION AGENCY NIPPON KOEI CO., LTD. Consulting Engineer, TOKYO JAPAN	MASTER PLAN STUDY FOR DEVELOPMENT OF THE TRANSMISSION SYSTEM OF THE CEYLON ELECTRICITY BOARD IN THE DEMOCRATIC SOCIALIST REPUBRIC OF SRI LANKA	TITLE Fig. 2. 1. 2 - 1 Rainfall Pattern of Sri Lanka