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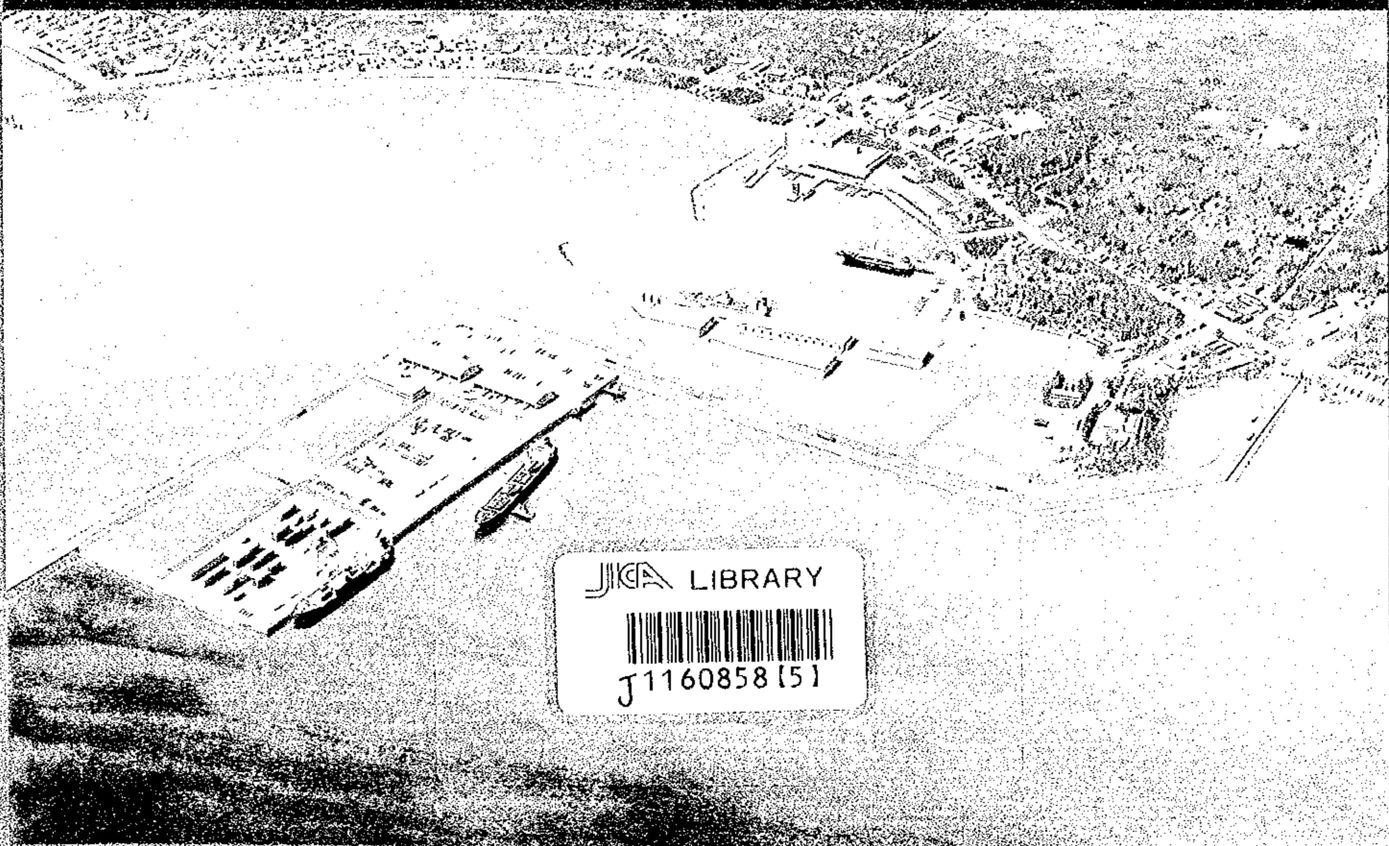
NO. 52

FINAL REPORT FOR THE STUDY ON URGENT DEVELOPMENT OF THE PORT OF GALLE AS A REGIONAL PORT IN THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

October 2000

MAIN REPORT



THE OVERSEAS COASTAL AREA DEVELOPMENT INSTITUTE OF JAPAN (OCDI)
JAPAN PORT CONSULTANTS, LTD. (JPC)

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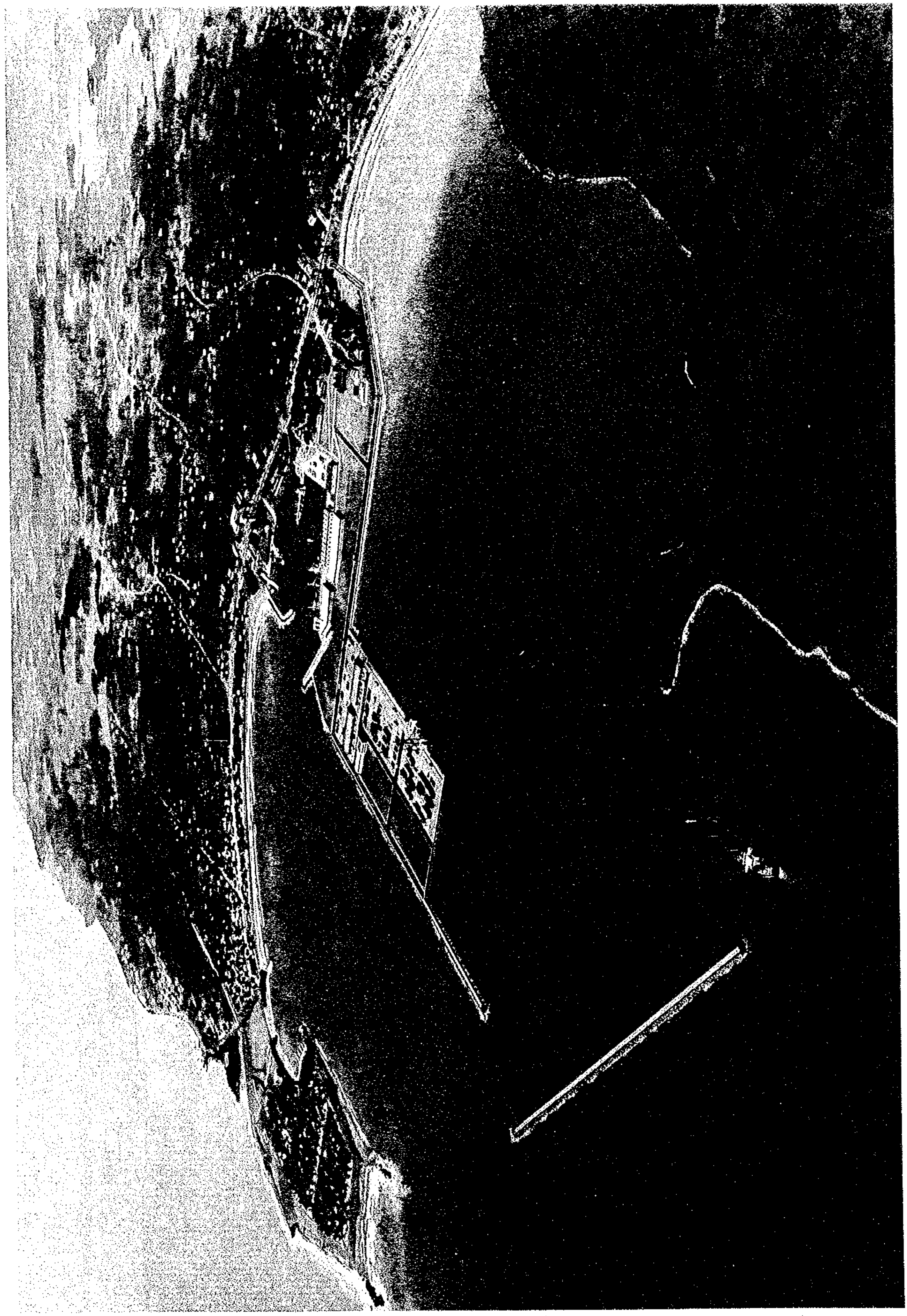
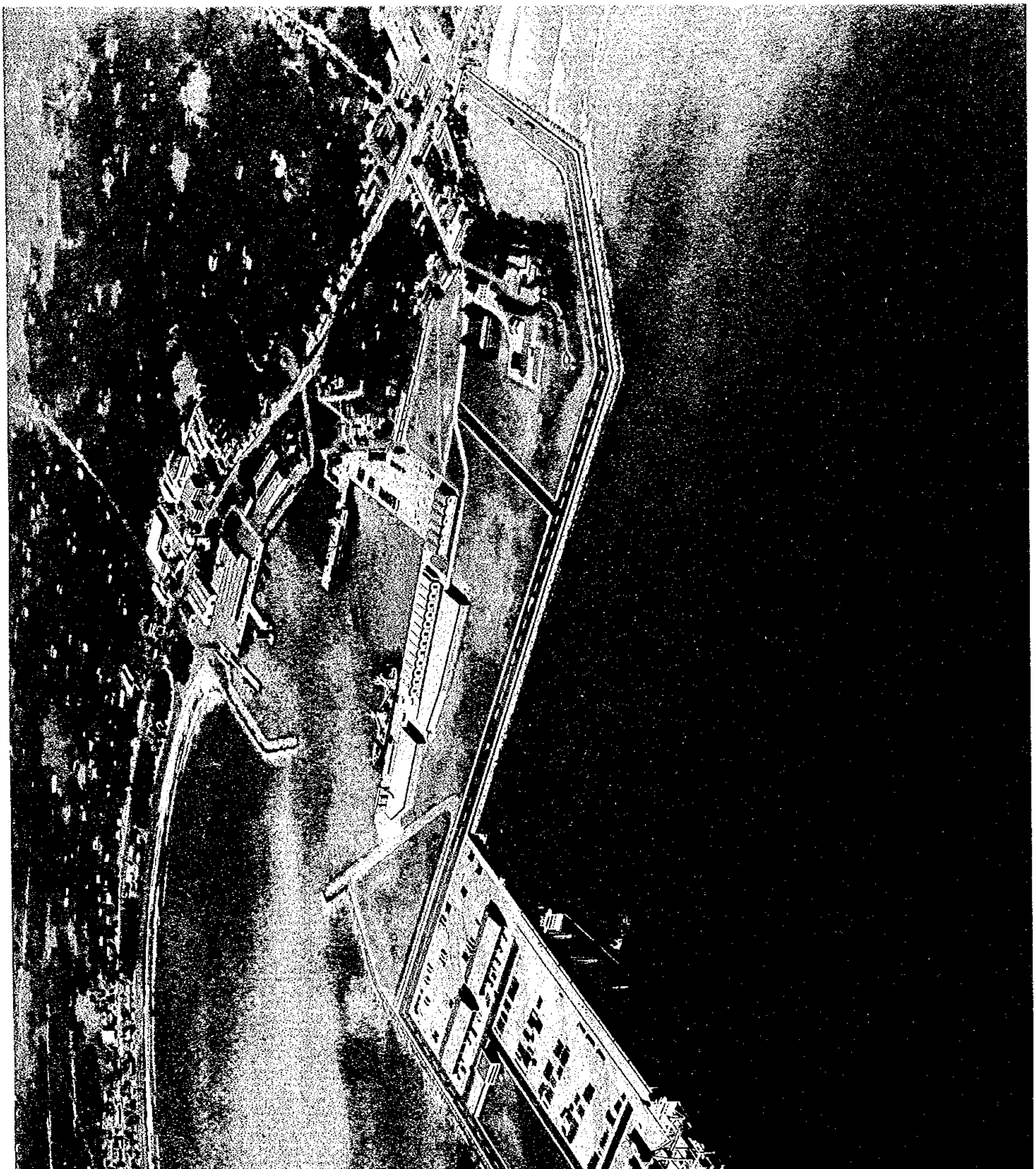




PREFACE

In response to a request from the Government of the Democratic Socialist Republic of Sri Lanka (hereinafter referred to 'GOSL'), the Government of Japan decided to conduct a study on Urgent Development of the Port of Galle as a Regional Port in the Democratic Socialist Republic of Sri Lanka and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent a study team to Sri Lanka between February 2000 and August 2000, which was headed by Mr. Yugo OTSUKI and was composed of members from the Overseas Coastal Area Development Institute of Japan (OCDI) and Japan Port Consultants, Ltd. (JPC).

The team held discussions with the officials concerned of GOSL and Sri Lanka Ports Authority (SLPA) and conducted field surveys at the study area. Upon returning to Japan, the study team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of this project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the GOSL and SLPA for their close cooperation extended to the study.

October 2000

Kunihiko Saito
President
Japan International Cooperation Agency

LETTER OF TRANSMITTAL

October 2000

Mr Kunihiko SAITO
President
Japan International Cooperation Agency

Dear Mr. Saito:

It is my great pleasure to submit herewith the Final Report of the Study on Urgent Development of the Port of Galle as a Regional Port in the Democratic Socialist Republic of Sri Lanka (hereinafter referred to 'Sri Lanka').

The study team of the Overseas Coastal Area Development Institute of Japan (OCDI) and Japan Port Consultants Ltd., (JPC) conducted surveys in Sri Lanka over the period between February 2000 and October 2000 as per the contract with the Japan International Cooperation Agency (JICA).

The findings of this study, which are compiled in this report, were fully discussed with the officials concerned of the Government of Sri Lanka and Sri Lanka Ports Authority (SLPA) to formulate the Urgent Development of the Port of Galle as a Regional Port in Sri Lanka for the period up to the year 2005

On behalf of the study team. I would like to express my heartfelt appreciation to the Government of Sri Lanka and SLPA for their diligent cooperation and assistance and for the heartfelt hospitality, which they extended to the study team during our stay in Sri Lanka.

I am also greatly indebted to the JICA, the Ministry of Foreign Affairs, the Ministry of Transport and the Embassy of Japan in Sri Lanka for giving us valuable suggestions and assistance during the preparation of this report

Yours faithfully,

Y. Otsuki

Yugo OTSUKI
Team Leader for the Study
Urgent Development of the Port of Galle
as a Regional port in
the Democratic Socialist Republic of Sri Lanka

ABBREVIATION LIST

Abbreviation	Meaning
ADB	: Asis Development Bank
ASTM	: American srandard test method
B.H	: Bore Hole
B.M	: Bench Mark
B/C	: Benefit / Cost
BOI	: Board of Investment
BOO	: Built, Own, Operate
BOT	: Built, Operate and Transfer
CCD	: Coast Conservation Department
CFC	: Conversion Factor for Consumption
CFS	: Container Freight Station
CFSL	: Conversion Factor for Skilled Labor
CFUL	: Conversion Factor for Unskilled Labor
CIF	: Cost, Insurance, and Freight
CIS	: Commonwealth of Independent States
D.L	: Datum level
DIR	: Overall wave direction (no separation between sea and swell))
DIRL	: Energy weighted mean direction of swell
DIRR	: Energy weighted mean direction of swell
DWT	: Deadweight tonnage
EIRR	: Economic Internal Rate of Return
EPZ	: Export Processing Zone
FIRR	: Financial Internal Rate of Return
FOB	: Free on Board
GDP	: Gross Domestic Product
GRDP	: Gross Regional Domestic Product
GST	: The Goods and Service tax
H.W.L	: Hight water level
H1/3	: Significant wave height
HMOL	: Swell significant wave height in water
HMOP	: Sea significant wave height in water
HOM	: Overall significant wave height in water
IMO	: International Maritime Organization
JBIC	: Japan Bank for International Cooperation
JICA	: Japan International Cooperation Agency
L.W.L	: Low water level
LHI	: Lanka Hydraulic Institute
M.S.L	: Mean sea level
MPDRR	: Ministry of Port Development, Rehabilitation and Reconstruction
NORAD	: Norwegian Agency for Development Cooperation
NPV	: Net Present Value
PKL	: Mean wave frequency 1/To2 of swell in Hz
PKR	: Mean wave frequency 1/To2 of seal in Hz
QEQ	: Queen Elizabeth Quay
RDA	: Road Development Authority
SAGT	: South Asia Gateway Terminal
SCF	: Standard Conversion Factor
SDA	: Southern Development Authority

SIDA	: Swedish International Development Cooperation Agency
SLPA	: Sri Lanka Ports Authority
SLR	: Sri Lanka Railway
SW	: South West
T1/3	: Significant wave period (Composit wave period)
TEU	: Twenty Foot Equivalent Unit
UNDP	: United Nations Development Program
W.D.L	: Work datum level
WSW	: West south west

CONTENTS

Part 2 SHORT-TERM DEVELOPMENT PLAN

Chapter 13 Financial Analysis

Chapter 14 Environmental Impact Assessment

APPENDIX (I)

(Part 1)

Chapter 3 Natural Conditions of Coastal Area Adjacent to Galle Port

Chapter 4 Present Conditions of Galle Port

(Part 2)

Chapter 6 Demand Forecast

TABLE LIST

PART I

PART II

APPENDIX

FIGURE LIST

PART I

PART II

APPENDIX

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

1. Background of the Study

The foreign trade of Sri Lanka has been increasing in line with the economic development of the country. Colombo Port is located close to world trade trunk routes between the east and west and plays an important role in maritime transport, particularly in container transshipment. Galle Port, which is located 120 km south of Colombo Port, is also very close to the main trunk routes and has the potential to play an important role in maritime transportation in Sri Lanka and to contribute to regional development in the Southern Area of the country.

" The Study on the Development of the Port of Galle " was conducted by JICA in 1991. The Study proposed to develop Galle Port as a supplementary port of Colombo Port to alleviate the burden on Colombo Port, but the plan was not implemented.

The Government of the Democratic Socialist Republic of Sri Lanka (hereinafter referred to as "GOSL") attaches importance to Southern Area Development and regards the Galle Port Development project as one of the leading projects for the development. The development principle of GOSL is to develop Galle Port as a regional port to contribute to Southern Area Development rather than as an international hub port.

In this context, GOSL requested the Government of Japan to conduct the study on urgent development of Port of Galle as a regional port. In response to the request, the Government of Japan entrusted the study to JICA. On November 12th, 1999, both sides agreed on the Scope of Work for the study. The study was conducted from February 2000 to October 2000 and the results of the study are incorporated in this report.

2. Objectives of the Study

The objectives of the Study are as follows:

(1) To review and revise the short-term development plan of Galle Port proposed in the "STUDY ON THE DEVELOPMENT OF THE PORT OF GALLE" conducted by JICA in 1991 considering the results of "The Master Plan Study for Southern Area Development in the Democratic Socialist Republic of Sri Lanka" conducted by JICA in 1997. The target year of the new short-term development plan is 2005.

(2) To investigate the viability of developing Galle Port as a multipurpose port for the regional needs.

3. Study Implementation

3.1 Study Period

February 2000 – October 2000

3.2 Organization of the Study

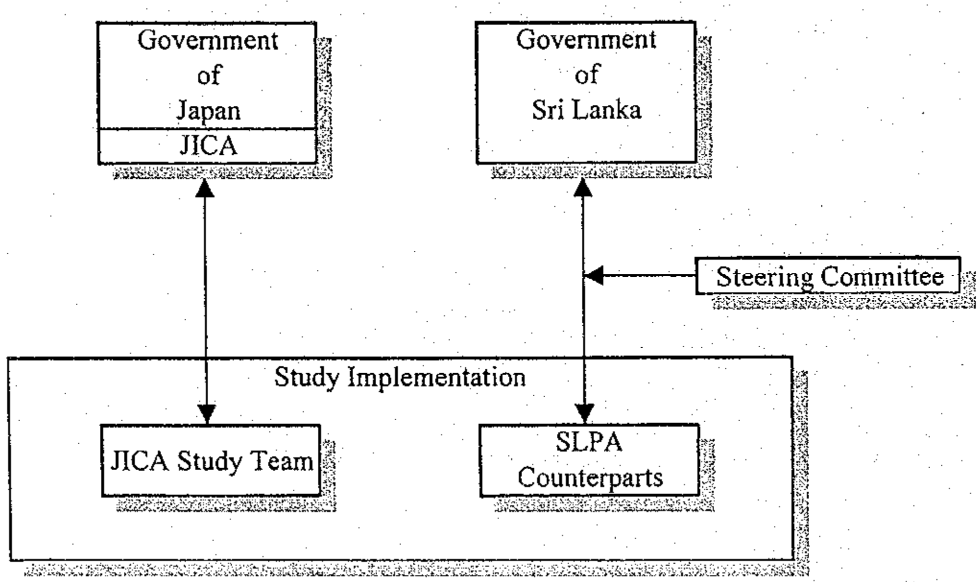
(1) Counterpart Agency in Sri Lanka

Sri Lanka Ports Authority

(2) Organization of the Study Team

Name	Responsibility
Yugo OTSUKI	Team Leader/Port Development Strategy
Yoshihisa FUJITA	Port Planning/Investment Planning
Katsuhiko OSHIMA	Regional Development
Hideki YOKOMOTO	Demand Forecast
Arata ICHIHASHI	Financial Analysis
Toshihiko KAMEMURA	Management and Operation/Port Promotion
Kunimasa NISHIGAYA	Economic Analysis
Toshiro ICHIZONO	Design of Port Facility(1)
Koji SUZUKI	Design of Port Facility(2)
Mitsutaka IMAMURA	Construction Planning/Cost Estimation(1)
Masakiyo MURAOKA	Construction Planning/Cost Estimation(2)
Mahesh W. JAYAWEERA	Natural Condition/Environmental Survey
Hiroto SUZUKI	Coordination

(3) Organization Chart



3.3 Flow Chart of Study

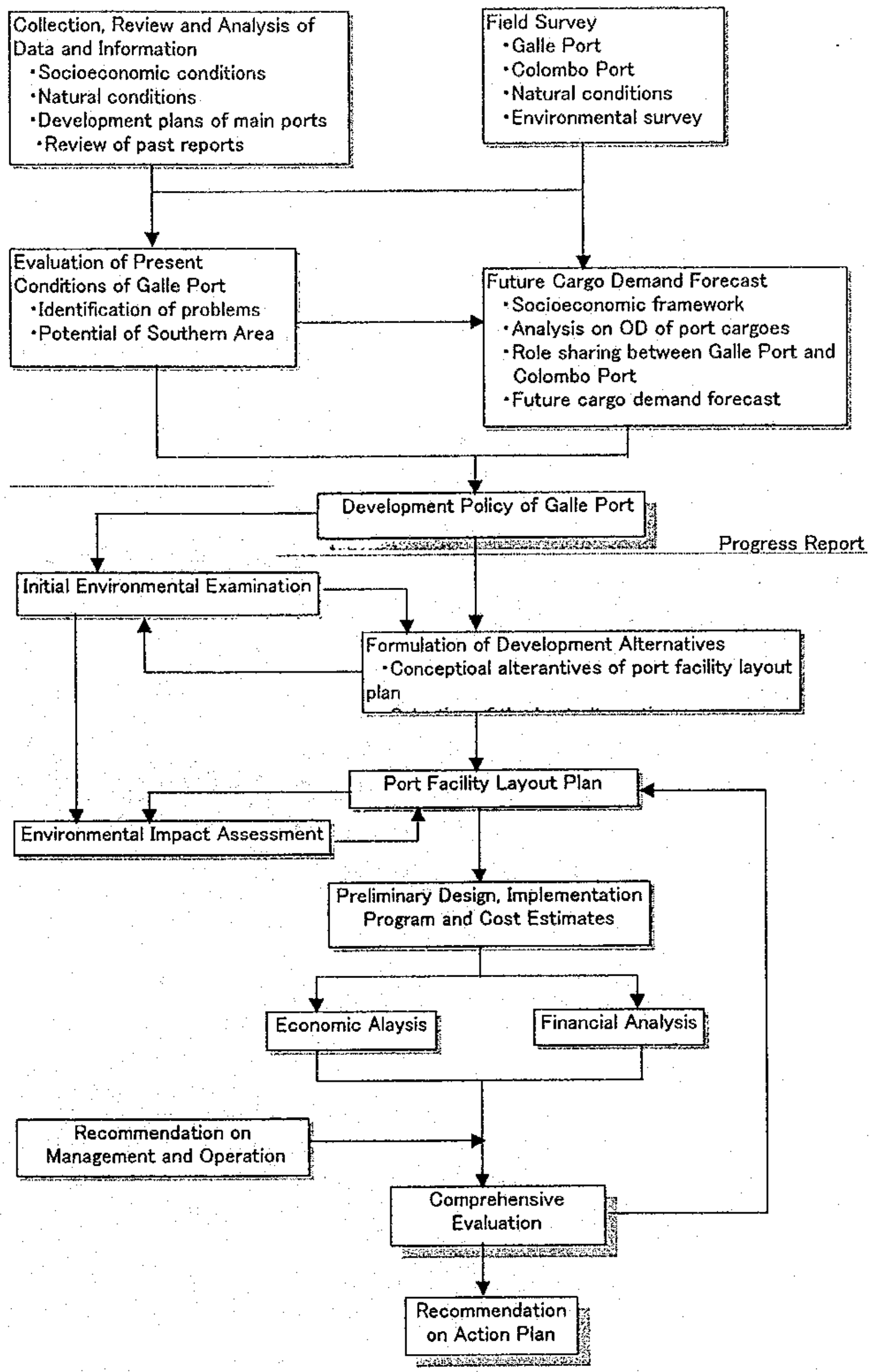


Figure　Flow Chart of the Study

4. Short-term Development Plan

4.1 Demand Forecast

Future cargo demand is estimated in Sri Lanka as a whole and then future cargo is allocated based on the roles/functions of Colombo Port and Galle Port. As for container cargoes, the possibility of container vessels' calling at Galle Port is investigated by analyzing container cargo movement at Colombo Port in detail. The forecast result of the future cargo volume at Galle Port is as follows:

Future Cargo Forecast

(thousand tons)

	2005	2010
Discharged	1,552	2,353
Conventional	1,394	2,148
Container	158	205
Loaded	113	149
Conventional	1	1
Container	112	148
Total	1,665	2,502

4.2 Development Principle

The development principles of Galle Port are as follows:

(1) To meet the cargo traffic demand by providing an optimum transportation service in the Southern Area in a manner beneficial to the whole nation.

(2) To function as a catalyst to energize the economic and social development of the Southern Area.

4.3 Main Facilities of Short-term Development Plan

Based on field surveys, future cargo demand forecast and other study results, a port facility layout plan that is cost effective and environmentally friendly is selected. Main facilities of the short-term development plan are described as follows:

List of Main Facilities

Facility	No.	Dimension / Capacity
Multipurpose berths	2	Length 240m, depth 12m
Approach channel	1	One way, width 160m
Turning basin	1	Diameter 240m, depth 12m
Navigational Aids	1	5 Buoys, 4 Beacons, 2 Leading light
Berth for small crafts	1	Length 170m, depth 4.5m
Shed	2	4,000 m², one story
Open yard	1	10,000 m²
Container yard	1	2.9 ha
CFS	—	A part of shed is allocated
Outer breakwater	1	Length 800m
Inner breakwater	1	Length 350m
Revetment	4	Length 500m, 350m, 470m, 1,050m
Main road	1	4-lane, 1.2 km
Connecting road	1	2-lane, 300m
Multipurpose crane	1	35 tons
Top lifter	3	2 x 35 tons, 1 x 15 tons
Folk lift	8	4 x 8 tons, 2 x 2 tons
Tractor head	10	For container cargo
Trailer	14	For container cargo

4.4 Cost Estimates

The total construction cost is ¥ 15,538 million (Rs. 11,654 million), of which the foreign portion is ¥ 11,830 million (76.1%) and local portion is Rs. 2,781 million (23.9%).

4.5 Management and Operation Plan and Port Promotion

(1) It is recommended that the new wharf of Galle Port be managed and operated by SLPA directly so as to serve unspecified users fairly given the limited number of berths and provide job opportunities within SLPA.

(2) Efficient and reliable operation is the best means of port promotion.

4.6 Environmental Impact Assessment (EIA)

EIA is conducted in accordance with JICA guideline. It is noted that there are no decisive factors to rule out the implementation of the project in terms of EIA if adequate mitigation measures are taken in the following matters:

(1) Coral reef and its associated fauna
(2) Fishing in the Dewata area
(3) Transportation of quarry products

5 Appraisal of the Short-term development Plan

5.1 Economic Appraisal

The economic rate of return (EIRR), benefit cost ratio (B/C), and net present value (NPV) for the project are 17.3%, 2.52 and Rs.8,113 million respectively and consequently the project is considered to be economically feasible from the viewpoint of the national economy of Sri Lanka.

5.2 Financial Appraisal

The financial rate of return (FIRR) for the project is 5.1%, exceeding the weighted average interest rate (3.5%) of assumed fund raising plans and hence the project is considered to be financially feasible.

RECOMMENDATIONS

RECOMMENDATIONS

Based on the results of the Study, it is recommended that the Government of Sri Lanka implement the short-term development plan of Galle Port as the urgent development plan. The development of Galle Port will have a positive impact on the Sri Lankan economy.

1. The Short-term Development Plan

The objectives of the short-term development plan are to construct a new multipurpose Terminal at the south of Gibbet Island, to provide high quality services to meet the future demand for cargo traffic in the southern area, and to accelerate Southern Area Development. The main components of the plan are summarized as follows:

Main Facilities of the Short-term Development Plan

Facility	No.	Dimension / Capacity
Multipurpose berths	2	Length 240m, depth 12m
Approach channel	1	One way, width 160m
Turning basin	1	Diameter 240m, depth 12m
Navigational Aids	1	5 Buoys, 4 Beacons, 2 Leading light
Berth for small crafts	1	Length 170m, depth 4.5m
Shed	2	4000 m², one story
Open yard	1	10,000 m²
Container yard	1	2.9 ha
CFS	—	A part of shed is allocated
Outer breakwater	1	Length 800m
Inner breakwater	1	Length 350m
Revetment	4	Length 500m, 350m, 470m, 1,050m
Main road	1	4-lane, 1.2 km
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Forklift	8	4 x 8 tons, 2 x 2 tons
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2. Enhancement of Cargo Handling Productivity

Measures to enhance the cargo handling productivity such as improvement of cargo handling operation, introduction of information system, vitalization of organization and improvement of personnel management system should be adopted.

3. Necessity of Government Initiatives in Galle Port Promotion

It is recommended that the Government take initiatives to promote the usage of Galle Port until the handing volume at the Port reaches a satisfactory level. This is because, although the future cargo demand of Galle Port is high, at the initial stage users of Galle Port would be limited due to the limited awareness of the new Galle Port among maritime industries and shippers.

4. Environment Conservation Measures

It is recommended that mitigation measures and monitoring works be conducted for coral reef and its associated fauna, fishing in the Dewata area, and transportation of quarry products to harmonize the project with the environment.

5. Promotion of Understanding of Galle Port Development

Publicity work on the significance of the project for the southern area development is necessary to get support from people in the area and consequently to ease implementation of the project.

6. Depth of Berths

It is recommended that new berths be designed as 14m to cope with the unexpected increase of calling vessel size. This is because the difference in construction cost between berths with 12m in depth and berths with 14m in depth per unit length is small while increasing the depth of existing berths would be very costly.

Part 1 PRESENT CONDITIONS

Chapter 1 Socioeconomic Condition of Sri Lanka / Southern Area

1.1 Natural Conditions

1.1.1 Geography and Topography

Sri Lanka, an island in the Indian Ocean, is located at the east-southeast tip of the Indian subcontinent and situated from 6 to 10 degrees north latitude and from about 80 to 82 degrees east longitude. Sri Lanka has a maximum length of about 430 km and a maximum width of about 220km and an area of about 65,000 k m^2.

Sri Lanka is separated from the subcontinent with the distance less than 30 km at Adam's Bridge in the Palk Strait, as well as by the Gulf of Mannar (see Figure 1.1.1). The northern part from the center of the island is almost all plains, while the southern part is mountainous and surrounded by coastal plains. The highest point in Sri Lanka is Pidurutalagala Peak, 2,524m above sea level, in Nuwara Eliya District.

The island consists of 9 provinces: Western, Central, Southern, North-Western, Sabaragamuwa, Northern, Eastern, Uva and North-Central, and 25- districts, such as Colombo, Kandy, etc (see Figure 1.1.2). The capital of Sri Lanka is Sri-Jayawardenepura (Kotte).

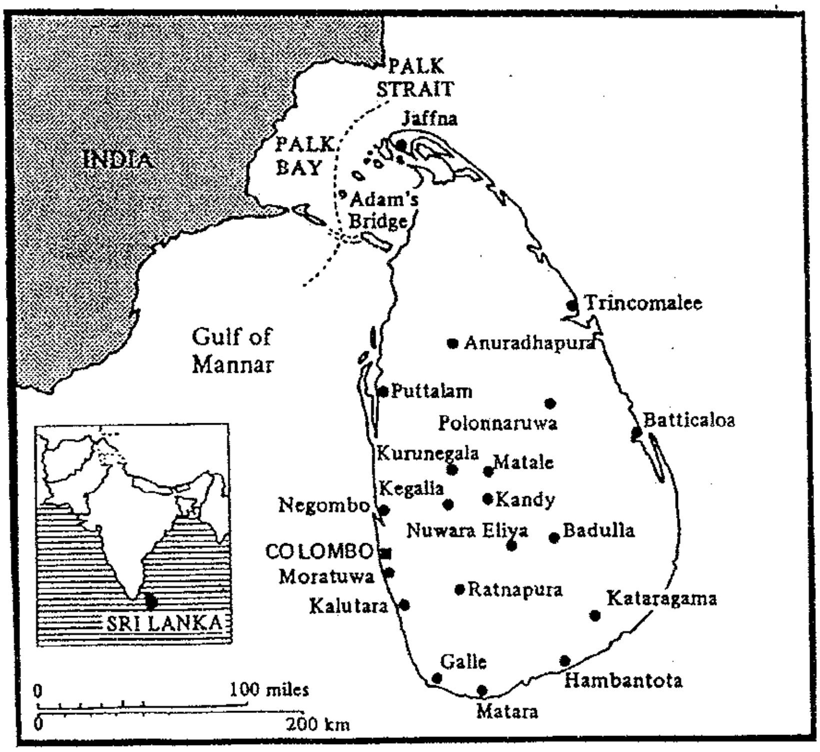


Figure 1.1.1 Democratic Socialist Republic of Sri Lanka

1.1.2 Climate

The climatic year in Sri Lanka can be divided into distinct periods, i.e., the Southwest Monsoon period from May to September, the Northeast Monsoon period from December to February and two intermonsoonal periods. The southwest quarter of the island receives 500mm to 4,000mm of rain and the rest of the island receives less than 500mm of rain in the Southwest Monsoon period. On the other hand, the whole island receives 500mm to 2,500mm of rain in the Northeast Monsoon period. Through the Year, the southwest quarter of the island receives much rain. The area receiving more than 75 inches (1,905mm) of rain is called the Wet Zone and the area with less than 75 inches is called the Dry Zone.

The temperature is almost constant through the Year, at about 29℃.The maximum and the minimum temperature at Colombo was 31.2℃ and 24.4℃ in 1997. The average temperature in Nuwara Eliya (altitude 1890m) where located hill country is around 16℃.

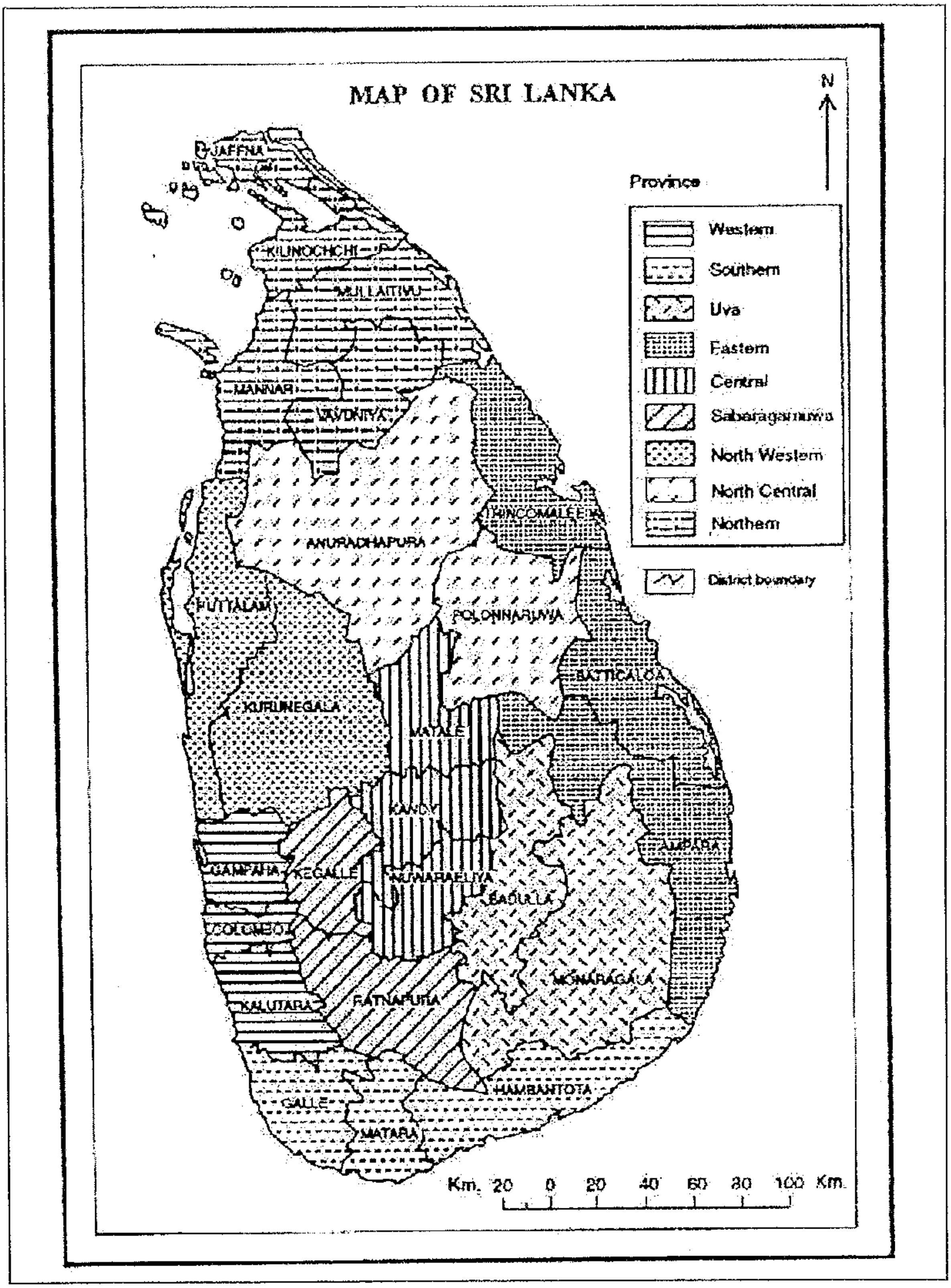
The average humidity is relatively high, at more than 75% at Colombo and Galle.

30-Year average annual rainfall and maximum and minimum temperatures at Selected stations are shown in Table 1.1.1.

Table 1.1.1 30-years average temperature and rainfall at selected station

Station	30-years average temperature 1951-1980		30-years average rainfall 1961-1990
	Max	Min	
Colombo	30.4	24.0	2,425.8
Trincomalee	31.1	25.2	1,580.0
Hambantota	30.2	24.1	1,049.6
Ratnapura	31.9	22.7	3,749.1
Anuradhapura	31.9	23.1	1,281.5
Kandy(katugastota)	28.7	20.2	1,840.1
Nuwara Eliya	20.2	11.4	1,905.1
Kankesanthurai	31.2	25.0	—
Jaffna	31.2	25.0	1,231.2

Source: Statistical Pocket Book of the Democratic Socialist Republic of Sri Lanka 1998



Source: Statistical Pocket Book Of The Democratic Socialist Republic Of Sri Lanka -1998

Figure 1.1.2 Province and District of Sri Lanka

1.2 Socioeconomic Conditions

The southern area is relatively less developed with heavy dependence on agriculture and underdevelopment of modern manufacturing. In spite of several sectoral development programs/projects, the area has not witnessed much development over the past 4 decades. This has been due to the stagnation or decline of some of its traditional economic activities (coconut, rubber, cinnamon and a number of crafts) and because the greater part of national resources have been concentrated in more developed areas of the country.

Notwithstanding, the southern area is important to the country's economy due to the various economic activities, which derive from its developed agriculture (tea industry) and partially developed industry and tourism as indicated the following sections.

The southern area will not be defined in a precise manner in this report. Following the definition made in the report 'A new future for Ruhuna[1] – A Regional Strategy for Development of the Southern Area of Sri Lanka' issued by the Ministry of Planning, Ethnic Affairs & National Integration in 1995, the area covers Southern Province as a core and its vicinity such as a part of Uva, Sabaragamuwa and Eastern Provinces as well. ('The Master Plan Study for Southern Area Development in the Democratic Socialist Republic of Sri Lanka' conducted by JICA also followed that definition.) In terms of district level, besides three Districts in Southern Province, namely; Galle, Matara and Hambantota, Monaragala in Uva Province, Ampara in Eastern Province and Ratunapura in Sabaragamuwa Province will be touched upon as well. In addition to that, from the viewpoint of hinterland for the new Galle Port plan, some part of Kalutura District in Western Province and Badulla District in Uva province will be taken into account in case of necessity. However, as far as socioeconomic conditions are concerned, due to lack of district-wise statistics, almost all cases deal with Southern Province which accounts for an estimated three quarters of the total output of the southern area.

1.2.1 Population

Sri Lanka had a population of 18.5 million, and an annual growth rate of 1.1% in 1997. The fertility rate was 2.2 and life expectancy was 72 years. The country's total population would double and reach 35 million by the year 2050 if it continues to grow at the current rate.

The population of the southern area was estimated at approximately 3 million, the majority of which, 2.4 million, resides in Southern Province, amounting to 13% of the total population.

1.2.2 GDP

Table 1.2.1 shows Province-wise GDP, population and GDP per capita from 1991 to 1997. It is clearly observed that compared to the tremendously huge share of the gross regional domestic product (GRDP) in Western Province, that of other provinces has continued to be low. Southern

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[1] N.B. In ancient times (around 200B.C) the region of the southern area of Sri Lanka was called 'Ruhuna'. This region played a vital role in building the nation as well as in the promotion of the Buddhist culture.

Province shared 9.7% of the national GDP in 1997, while Uva, Sabaragamuwa and Eastern Provinces had respective shares of 8.0%, 5.5% and 3.3%. Southern Province was placed the fourth after Western, Central and North Western Provinces, even though the differences are quite little between the latter two provinces. Even in terms of GDP per capita, the southern area has been showing less than the national average.

Table 1.2.2 indicates increase of national GDP and its sector-wise composition from 1992 to 1997.

Table 1.2.1 Sri Lanka Regional Socioeconomic Chart

PROVINCE		1991	1992	1993	1994	1995	1996	1997
	G.D.P. (RS.MN)	136,822.5	146,404.7	156,461.9	167,701.2	179,720.2	189,281.8	201,905.7
	G.D.P. (%)	41.1	42.1	42.1	42.7	43.3	44.0	44.1
WESTERN	POPULATION (THOUSAND)	4,447	4,495	4,548	4,607	4,662	4,717	4,769
	POPULATION (%)	25.8	25.8	25.8	25.8	25.7	25.7	25.7
	G.D.P. / CAPITA (RS.)	30,767	32,571	34,402	36,401	38,550	40,128	42,337
	G.D.P. (RS.MN)	33,885.0	34,707.2	37,422.8	38,507.1	40,357.1	41,728.0	44,410.1
	G.D.P. (%)	10.2	10.0	10.1	9.8	9.7	9.7	9.7
SOUTHERN	POPULATION (THOUSAND)	2,244	2,273	2,306	2,337	2,369	2,394	2,415
	POPULATION (%)	13.0	13.0	13.1	13.1	13.1	13.0	13.0
	G.D.P. / CAPITA (RS.)	15,100	15,269	16,228	16,477	17,036	17,430	18,389
	G.D.P. (RS.MN)	39,393.5	39,756.4	42,230.3	44,243.1	46,062.8	46,890.3	49,904.1
	G.D.P. (%)	11.8	11.4	11.4	11.3	11.1	10.9	10.9
CENTRAL	POPULATION (THOUSAND)	2,212	2,203	2,221	2,251	2,282	2,316	2,352
	POPULATION (%)	12.8	12.6	12.6	12.6	12.6	12.6	12.7
	G.D.P. / CAPITA (RS.)	17,809	18,046	19,014	19,655	20,185	20,246	21,218
	G.D.P. (RS.MN)	11,161.9	10,884.2	10,450.1	10,630.1	10,171.3	10,324.5	10,072.4
	G.D.P. (%)	3.3	3.1	2.8	2.7	2.5	2.4	2.2
NOTHERN	POPULATION (THOUSAND)	1,317	1,330	1,345	1,361	1,378	1,389	1,411
	POPULATION (%)	7.6	7.6	7.6	7.6	7.6	7.6	7.6
	G.D.P. / CAPITA (RS.)	8,475	8,184	7,770	7,811	7,381	7,433	7,138
	G.D.P. (RS.MN)	13,934.5	14,010.0	15,297.9	15,106.9	16,301.9	14,196.1	15,108.6
	G.D.P. (%)	4.2	4.0	4.1	3.8	3.9	3.3	3.3
EASTERN	POPULATION (THOUSAND)	1,219	1,240	1,263	1,289	1,316	1,337	1,354
	POPULATION (%)	7.1	7.1	7.2	7.2	7.3	7.3	7.3
	G.D.P. / CAPITA (RS.)	11,431	11,298	12,112	11,720	12,387	10,618	11,158
	G.D.P. (RS.MN)	35,313.8	37,146.0	38,614.1	41,113.2	42,684.8	43,018.6	45,783.6
	G.D.P. (%)	10.6	10.7	10.4	10.5	10.3	10.0	10.0
NORTH WESTERN	POPULATION (THOUSAND)	2,026	2,053	2,080	2,109	2,138	2,162	2,183
	POPULATION (%)	11.7	11.8	11.8	11.8	11.8	11.8	11.8
	G.D.P. / CAPITA (RS.)	17,430	18,094	18,564	19,494	19,965	19,898	20,973
	G.D.P. (RS.MN)	20,875.6	21,919.2	23,714.7	25,472.7	26,492.9	27,531.9	28,843.7
	G.D.P. (%)	6.3	6.3	6.4	6.5	6.4	6.4	6.3
NOTRTH CENTRAL	POPULATION (THOUSAND)	1,036	1,054	1,073	1,091	1,107	1,122	1,130
	POPULATION (%)	6.0	6.0	6.1	6.1	6.1	6.1	6.1
	G.D.P. / CAPITA (RS.)	20,150	20,796	22,101	23,348	23,932	24,538	25,525
	G.D.P. (RS.MN)	17,596.9	18,130.6	20,179.1	20,321.3	21,201.1	23,230.0	25,181.0
	G.D.P. (%)	5.3	5.2	5.4	5.2	5.1	5.4	5.5
UVA	POPULATION (THOUSAND)	1,072	1,075	1,090	1,107	1,127	1,140	1,154
	POPULATION (%)	6.2	6.2	6.2	6.2	6.2	6.2	6.2
	G.D.P. / CAPITA (RS.)	16,415	16,866	18,513	18,357	18,812	20,377	21,821
	G.D.P. (RS.MN)	24,247.6	24,866.5	27,510.7	29,787.1	31,611.6	33,984.7	36,626.9
	G.D.P. (%)	7.3	7.1	7.4	7.6	7.6	7.9	8.0
SABARAGAMUWA	POPULATION (THOUSAND)	1,694	1,703	1,720	1,739	1,757	1,771	1,784
	POPULATION (%)	9.8	9.8	9.7	9.7	9.7	9.7	9.6
	G.D.P. / CAPITA (RS.)	14,314	14,602	15,995	17,129	17,992	19,190	20,531
	G.D.P. (RS.MN)	333,231.3	347,824.8	371,881.6	392,882.7	414,603.7	430,185.9	457,836.1
	G.D.P. (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
TOTAL	POPULATION (THOUSAND)	17,267	17,426	17,646	17,891	18,136	18,348	18,552
	POPULATION (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	G.D.P. / CAPITA (RS.)	19,299	19,960	21,075	21,960	22,861	23,446	24,679

Source: National Planning Dept., Min. of Finance; Central Bank of Sri Lanka

Table 1.2.2 Composition of GDP 1992-1997

	Rupees Million						Percntage Share					
	1992	1993	1994	1995	1996	1997	1992	1993	1994	1995	1996	1997
Gross Domestic Product by Sector (Current Factor Cost Prices)	386,999	453,092	523,300	598,327	695,934	803,698	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture, Forestry & Fishing	100,080	111,659	124,370	137,678	156,108	175,774	25.9	24.6	23.8	23.0	22.4	21.9
Mining & Quarrying	6,757	8,446	10,473	11,510	13,927	16,587	1.7	1.9	2.0	1.9	2.0	2.1
Manufacturing	59,346	68,881	80,482	94,098	112,724	131,876	15.3	15.2	15.4	15.7	16.2	16.4
Construction	28,485	32,615	38,323	44,455	48,234	56,434	7.4	7.2	7.3	7.4	6.9	7.0
Electricity, Gas, Water & Sanitary	4,630	6,065	7,727	8,701	9,171	11,280	1.2	1.4	1.5	1.5	1.3	1.4
Transport, Storage & Communication	38,587	45,533	52,591	59,217	73,784	86,927	10.0	10.0	10.0	9.9	10.6	10.7
Wholesale & Retail Trade	83,904	99,736	115,021	131,449	155,316	177,123	21.7	22.0	22.0	22.0	22.3	22.0
Banking, Insurance & Real Estate	20,827	27,804	35,617	43,346	49,675	59,610	5.4	6.1	6.8	7.2	7.1	7.4
Ownership of Dwellings	9,146	10,344	11,513	12,572	14,232	15,769	2.4	2.3	2.2	2.1	2.0	2.0
Public Administration & Defense	18,141	22,622	25,314	31,136	35,215	40,990	4.7	5.0	4.8	5.2	5.1	5.1
Service(n.e.s)	17,096	19,387	21,869	24,165	27,548	31,928	4.4	4.3	4.2	4.0	4.0	4.0

Source: Central Bank of Sri Lanka

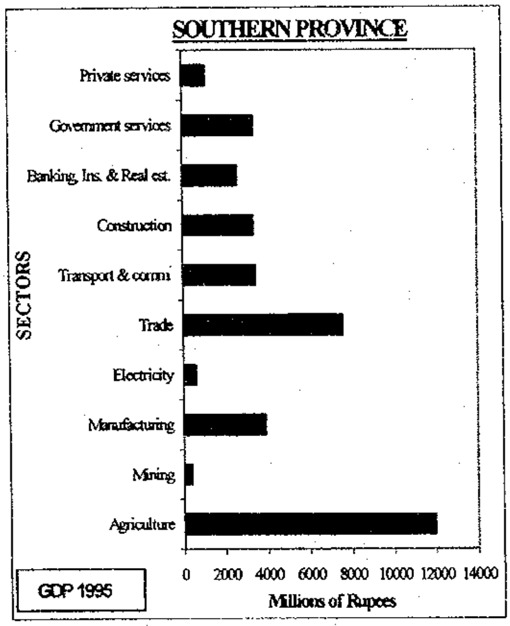
The main economic, sector-wise characteristics of Southern Province and three adjacent provinces in 1995 are shown below. It is clearly observed that the economies of these area are heavily dependent on agriculture, while manufacturing is underdeveloped.

SOUTHERN PROVINCE

SECTORS	RUPEES (millions)
Agriculture	11970.1
Mining	380.0
Manufacturing	3893.0
Electricity	607.9
Trade	7578.5
Transport & comm.	3465.9
Construction	3389.3
Banking, Ins. & Real est.	2627.7
Government services	3403.6
Private services	1129.0

UVA PROVINCE

SECTORS	RUPEES (millions)
Agriculture	7343.9
Mining	257.7
Manufacturing	2111.1
Electricity	199.6
Trade	3400.8
Transport & comm.	1820.2
Construction	1620.7
Banking, Ins. & Real est.	1412.1
Government services	1630.9
Private services	399.6



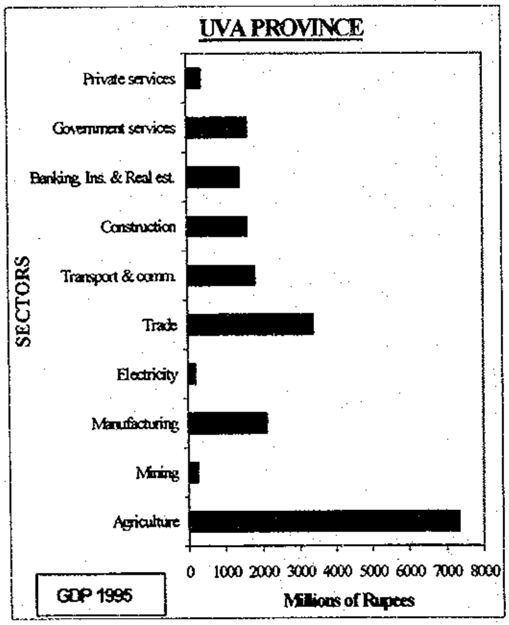


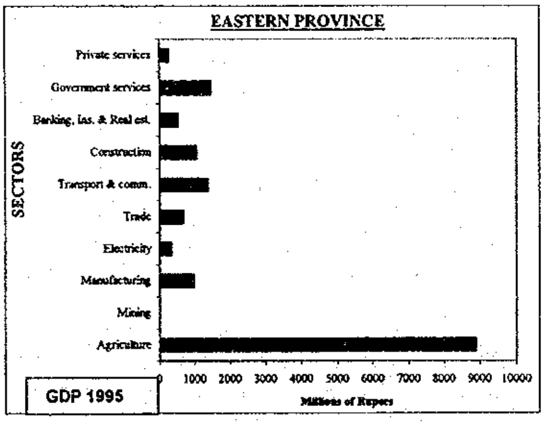
Figure 1.2.1 Provincial GDP by sector (1)

EASTERN PROVINCE

SECTORS	RUPEES (millions)
Agriculture	8889.1
Mining	0.0
Manufacturing	970.4
Electricity	341.0
Trade	676.9
Transport & comm.	1356.4
Construction	1047.6
Banking, Ins. & Real est.	526.9
Government services	1451.6
Private services	269.8

SABARAGAMUWA PROVINCE

SECTORS	RUPEES (millions)
Agriculture	8374.7
Mining	2053.0
Manufacturing	4516.3
Electricity	549.8
Trade	6081.3
Transport & comm.	1277.3
Construction	2176.6
Banking, Ins. & Real est.	2239.7
Government services	2036.3
Private services	809.3



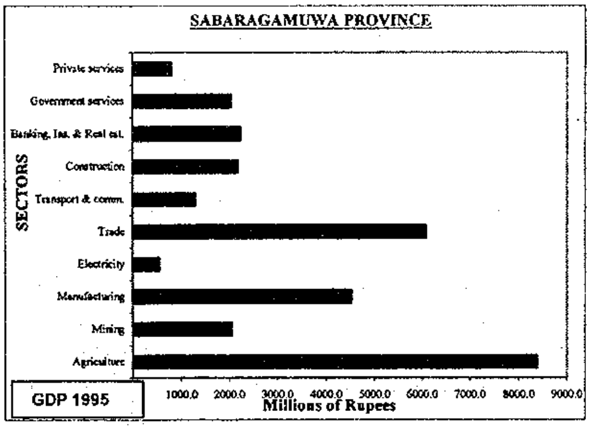


Figure 1.2.2 Provincial GDP by sector (2)

Another concern is the high unemployment rate in this area, especially in Southern Province. According to 1996/1997 statistics, 13.5% of labor force was unemployed, while the national average was 10.4%. Particularly, younger people in the 14-18 year and 19-25 year age groups had high unemployment rates of 39.0% and 42.2% respectively.

1.2.3 Trade

The foreign trade situation changed drastically after the economic liberalization in 1977. The country's exports grew by about 10% annually during the last two decades and kept pace with the growth of world exports, which grew by 9.1%. Quantitative controls on imports were totally eliminated during the post-liberalization era. The imports grew annually by 12.4% during this period. Imports and exports in 1997 accounted for 69.7% of GDP compared with 35% in 1977. The trade sector became a driving force in the economy, encouraging the growth of income and employment opportunities.

The export structure became diversified with the emergence of new export items such as garments, rubber based products, ceramics, petroleum products, various spare parts including electronics, and industrial exports became the largest contributor to export earnings, accounting for 74.1% of total exports in1997. The composition of imports also changed from consumer goods to growth oriented intermediate and investment goods which together accounted for 75.4% of imports in 1997.

Table 1.2.3 Summary of Foreign Trade 1991-1997

(Unit: Rs. Million)

Item	1991	1992	1993	1994	1995	1996	1997
Exports, Rs. Mn.	82,225	107,855	138,175	158,554	195,092	226,801	274,193
Agricultural Exports	26,537	26,504	31,618	34,692	42,578	53,206	62,667
Tea	17,867	14,893	19,911	20,964	24,638	34,067	42,533
Rubber	2,641	2,960	3,086	3,582	5,713	5,753	4,640
Coconut Products	2,619	3,691	2,796	3,761	5,270	6,091	6,939
Others	3,410	4,959	5,825	6,385	6,957	7,295	8,555
Industrial Exports	51,188	77,281	101,437	118,544	147,094	166,543	203,114
Textiles & Garments	31,891	53,209	68,150	76,685	94,946	105,341	134,455
Petroleum Products	3,289	2,771	3,801	3,959	4,374	5,740	5,743
Other	16,008	21,301	29,486	37,900	47,774	55,463	62,916
Mineral Exports	2,562	2,749	3,653	4,292	4,447	5,292	5,271
Other	1,938	1,321	1,467	1,026	1,098	1,760	3,141
Imports, Rs. Mn.	126,643	153,555	193,550	235,576	272,200	301,076	346,026
Consumer Goods	32,357	36,746	42,981	51,810	60,508	68,372	72,062
Intermediate Goods	64,265	78,043	98,343	114,004	138,475	153,117	182,754
Investment Goods	29,792	37,294	50,508	67,524	60,916	66,647	78,232
Unclassified	229	1,472	1,718	2,238	12,301	12,940	12,978
Balance of Trade, Rs.Mn.	-44,418	-45,700	-55,375	-77,022	-77,108	-74,274	-71,835

Source: Central Bank of Sri Lanka

Another thrust in foreign trade came from the Indo-Lanka Free Trade Agreement which came into effect on 1st March of this year. The primary objective of the first bilateral agreement of such kind is the promotion of long-run economic growth and development of the country by removing barriers to trade with preferred trading partner. Sri Lanka removed tariffs immediately for some products, while granted partial concessions on some other products. The country will gradually remove tariffs on those products over a period of eight years.

1.3 Major Industrial Sectors

1.3.1 Agriculture

(1) Overview

The agricultural sector (including forestry and fishery) remains a major force in the country's economy in terms of GDP and employment of labor force, accounting for 21.9% and 47.1% respectively in 1997. Agricultural exports like tea, rubber, coconut and so on shared 22.9% of the total export volume in the same year.

In Southern Province, agricultural GDP stood at 29.7% in the total GRDP in 1995, an increase of 30.7% compared to the 1990's.

(2) Paddy

Paddy cultivation in Southern Province is carried out by small holders. Net extent of harvested area in the Province accounted for 76,300 hectares in 1997, sharing 12.3% of the total national cultivated area. Production in the area amounted to 251,900 MT which was equivalent to 11.4% to all island production, indicating a slightly low productivity compared to the share of the cultivated area.

(3) Plantation Crops

Plantation crops consisting of tea, rubber and coconut are grown by both the state sector and private small holding sector with the latter significantly contributing to national production.

1) Tea

Even though the tea industry played a dominant role in the economy of the country for a long time, it has shown a declining trend over the years. The contribution to GDP from the tea sector, which stood at 8% in the early 1950s, had declined to 3.6% by 1985 and by 1997 it was only 1.6%. However, in terms of external trade, it still continues to earn a large amount of foreign exchange by exports. It accounted for 15.3% of the total exports and 67.9% of agricultural exports in 1997.

Tea production increased from 136 million kg in 1948 to 277 million kg in 1997. It is reported that a clear improvement in tea output was seen after the management was transferred to private companies in recent years. The volume and value of exports increased to 269 million-kg and Rs. 42,533 million in 1997, compared to 220 million-kg and Rs. 12,299 million respectively in 1988. Most of the tea production, nearly 97%, is bound for export markets. The exports to Middle Eastern countries and CIS countries account for over 40% and 18% respectively of the total exports. Sri Lanka was the world's largest exporter of tea for many years but was surpassed by India or Kenya. Once again, however, in 1997, the country became the premier exporter of tea, sharing 21% of world tea exports.

The southern area is well placed in production of tea, specifically higher quality tea named 'Low Grown'. (Colombo auction price of low grown was much higher than high and medium growns, representing Rs. 129 per kg versus Rs. 109 and Rs. 107 respectively in 1997). Low grown shares half of the total production and the southern area cover about 70% of low grown tea products in recent years. Southern Province had 233 tea factories out of 776 factories all over the island in 1998.

2) Rubber

Rubber production slightly increased from 96 million kg in 1948 to 106 million kg in 1997. The highest level of rubber production was in 1970 when it reached 160 million kg. 'The decline in production was mainly due to poor crop management under state ownership after the nationalization of rubber plantations in the 1970s and reduced cultivated extents.' ('Economic Progress of Independent Sri Lanka') Rubber production was, as in the case of tea, primarily aimed at the export market. Nearly 100% of the production used to be exported, meanwhile in 1997, the country exported 61.4 million kg, 58% of production as a raw material. The balance is now being used by the domestic industries. As export value, it earned Rs. 4,640 million, equivalent to 11% of the value of tea exports.

Southern Province contributed only 11 million kg out of the total production of 106 million kg, while production in the Sabaragamuwa Province was huge at 51 million kg in 1997.

3) Coconut

Coconut production increased from 1,765 million nuts in 1948 to 2,630 million nuts in 1997. Nearly 70% of the production is domestically consumed, being an important item in the daily diet of Sri Lankan people. The balance is converted to major kernel products such as copra, coconut oil, desiccated coconut and in recent years, to more value added products like fibre based products and charcoal for export. Exports of coconut products accounted for Rs. 6,939 million, slightly larger than in the case of rubber in 1997.

In coconut production, Southern Province does not play an important role, having an 11.8% share of the total production.

Table 1.3.1 Principal Crops by Province

Item	All Island	Southern	Sabara-gamuwa	Uva	Eastern	Central	North Central	Northern	North Western	Western
Tea										
Production, Mn. Kg										
1996	258.0	78.5	58.1	19.5	-	97.7	-	-	-	4.2
1997	277.0	77.4	58.5	23.1	-	113.8	-	-	-	4.2
No. of Tea Factory ('98)	776	233	133	78	-	315	-	-	-	17
Rubber										
Estimated Production, Mn. Kg										
1996	112.5	11.7	53.9	1.3	-	3.4	-	-	2.3	40.0
1997	105.8	11.0	50.7	1.2	-	3.2	-	-	2.2	37.6
Coconut										
Estinated Production, Mn. Nuts										
1996	2,546.0	299.9	219.1	40.4	57.7	121.1	51.9	77.9	1,222.5	455.6
1997	2,631.0	309.9	226.5	41.7	59.6	125.1	53.6	80.5	1,263.4	470.8
Paddy										
Production, MT thousand										
1996	2,061.0	255.5	121.9	211.1	505.5	150.9	503.9	18.0	181.1	113.2
1997	2,239.3	251.9	134.8	205.6	482.2	143.7	513.7	67.5	312.6	127.2

Source: Central Bank of Sri Lanka

1.3.2 Industry

(1) Overview

Under the economic policy reform in 1977 there was a complete turn around in the industrial policy, focusing it mainly on the export market and relying on the private sector. Foreign investment was encouraged by introducing various incentives and minimizing administrative problems and delays. The simplification of the tariff system, unification of the exchange rate and abolition of foreign exchange budgeting were pursued to cater to the latter problems.

Since 1990, special attention has been given to decentralization of industrial locations. Special incentives have been given for investors in remote areas. The 200 Garment Factory Programme and industrial estates/parks were major policies in this direction. The establishment of the Board of Investment (BOI) of Sri Lanka in 1992 was another step in this new direction. BOI, which has its origins in the Greater Colombo Economic Commission, is structured to function as a central facilitation point for foreign and local investors. It is directly responsible for investment incentives such as tax holidays, preferential tax rates, and exemptions from customs duty or foreign exchange controls.

Industrial sector shared 25.5% of the country's total GDP, while manufacturing stood at 16.4% in 1997. GDP structure of manufacturing from 1992 to 1997 is shown below.

Table1.3.2 GDP Structure of Manufacturing

(Unit: Rs. Million)

	1992	1993	1994	1995	1996	1997
Manufacturing	59,346	68,881	80,482	94,098	112,724	131,876
(%)	100.0	100.0	100.0	100.0	100.0	100.0
Processing of Tea, Rubber & Coconut Kernel Products	7,839	8,427	9,994	11,853	16,203	19,476
(%)	13.2	12.2	12.4	12.6	14.4	14.8
Factory Industry	47,250	55,707	64,174	74,699	87,771	102,253
(%)	79.6	80.9	79.7	79.4	77.9	77.5
Small Industry	4,257	4,747	6,314	7,546	8,750	10,147
(%)	7.2	6.9	7.8	8.0	7.8	7.7

Source: Central Bank of Sri Lanka

(2) Manufacturing

Regional distribution of industrial enterprises from 1996 to 1998, while progress of distribution by Province between 1970 and 1997 are shown in Table 1.3.3 and Figure 1.3.1. The concentration of industries in the Western Province, especially in Colombo and Gampaha District, was further intensified with the introduction of the export-oriented industrial policy in 1977, due to better infrastructure facilities, proximity to port facilities and high dependence on imported raw materials.

Meanwhile, due to the Government policy specifically aimed at promoting non-polluting large and small scale industries in rural areas to foster regional industrial development, number of industries in the southern area has steadily increased. The regionalisation of industries was also emphasized in the Two Hundred Garment Factory Programme, the Regional Industrial Park Programme and the Southern Regional Development Programme.

Tabe 1.3.3 Regional Distribution of Industrial Enterprises(a)

(Unit: Numbers)

District	Industries Registered under Ministry of Industrial Development			Industries under BOI: Section 17*			Industries under BOI: 200 Garment Factory Programme			Industries under BOI: Section 16**			Total		
	1996	1997	1998(a)	1996	1997	1998(a)	1996	1997	1998(a)	1996	1997	1998(a)	1996	1997	1998(a)
1.Colombo	1,247	1,275	1,311	208	235	277	15	15	15	215	217	239	1,685	1,742	1,842
2.Gampaha	180	186	200	262	289	341	7	7	7	79	81	82	528	563	630
3.Kalutara	50	54	60	30	38	53	9	9	10	15	17	17	104	118	140
4.Galle	27	27	27	22	20	28	4	7	5	16	15	16	69	69	76
5.Puttalam	21	21	21	25	34	58	12	12	12	10	10	11	68	77	102
6.Kandy	28	29	30	16	19	30	11	12	12	9	9	10	64	69	82
7.Kurunegala	9	10	11	18	21	29	11	11	11	8	8	7	46	50	58
8.Matara	23	26	28	2	3	4	4	4	4	1	1	1	30	34	37
9.Hambantota	19	19	19	1	1	2	5	7	7	2	1	1	27	28	29
10.Nuwara Eliya	3	3	3	8	10	15	11	12	9	3	3	3	25	28	30
11.Ratnapura	2	3	3	6	7	9	15	16	15	2	2	2	25	28	29
12.Anuradhapura	6	6	6	2	2	4	13	14	15	1	1	1	22	23	26
13.Badulla	10	11	11	2	2	4	7	9	7	3	3	3	22	25	26
14.Kegalle	3	3	5	4	5	10	8	8	8	0	0	2	15	16	25
15.Matara	4	4	5	3	3	5	5	5	5	0	0	0	12	12	15
16.Moneragala	1	1	1	0	0	0	5	5	4	2	2	2	8	8	7
17.Polonnaruwa	0	0	0	1	2	2	5	5	4	1	1	0	7	8	6
18.Ampara	4	6	6	0	0	1	3	3	5	0	0	0	7	9	12
19.Trincomalee	0	0	0	4	0	1	1	1	1	1	1	1	2	2	3
20.Batticaloa	0	0	0	0	0	2	1	1	1	1	1	1	2	2	4
21.Vavuniya	0	0	0	0	0	0	2	2	2	0	0	0	2	2	2
22.Jaffna	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
23.Mannar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1,637	1,684	1,747	610	691	876	154	165	160	369	373	399	2,770	2,913	3,182

Sounces: Ministry of Industrial Devefopment

(a)Provisional

N.B. * Under Section 17 of BOI Law, BOI grants special concessions to companies that meet the country's strategic objectives

** Under Section 16, BOI approves foreign investment in projects that will operate under 'normal law' of the country.

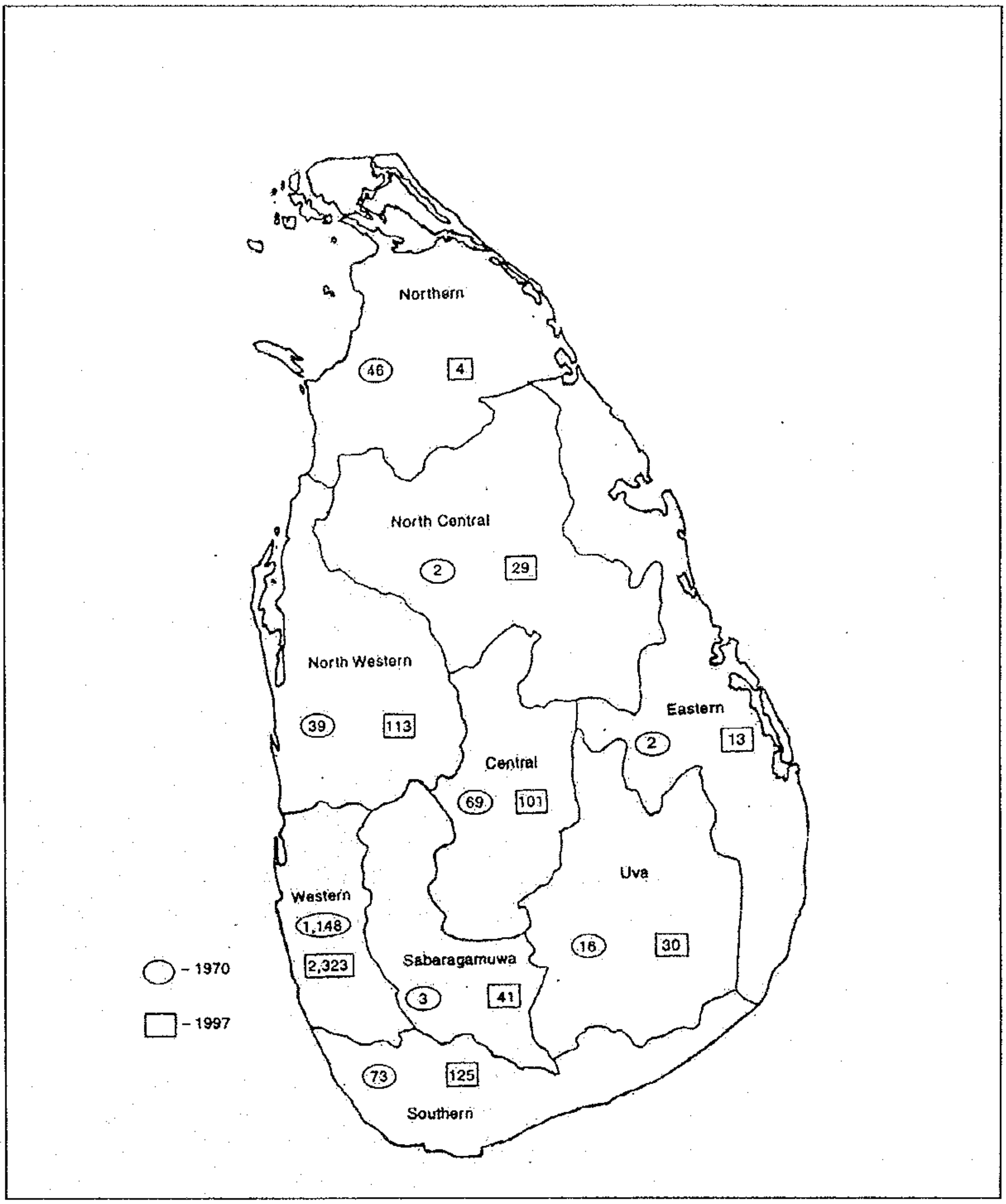


Figure 1.3.1 Industrial Distribution by Province

The structure of the manufacturing sector in Southern Province is shown in Table 1.3.4 The share of the sector, which accounted for 9.6% of the Province's GDP in 1995, is far below the national average. This seems due to the limitation of natural resources to support a major industrialization drive, especially agricultural and mineral resources providing limited opportunity for further processing.

Table 1.3.4 Structure of Manufacturing in Southern Province

(Unit:Rs. Million)

	1991	1992	1993	1994	1995
Food, Beverages, Tobacco	2177.4	2359.1	2583.3	2802.9	3033.1
Textile, Apparel, Leather	233.2	260.1	284.8	309.0	334.4
Wood and Wood Products	116.1	126.6	138.6	150.4	167.2
Paper, Printing and Publishing	2.0	2.2	2.4	2.6	2.8
Chemicals, Petroleum, Rubber	7.4	8.0	8.8	10.1	10.4
Non-metallic Mineral Products	146.7	167.4	183.4	198.9	215.3
Basic-metal Industry	2.0	2.8	2.6	4.0	4.6
Metal products, Machinery & equipment	43.6	46.8	51.8	55.0	59.2
Other Manufacturing	50.3	54.8	60.0	65.1	70.5
Total	2778.7	3027.9	3315.7	3598.0	3893.0

Source: Ministry of Finance and Planning

(3) Koggla Export Processing Zone

The establishment of the Koggala Export Processing Zone (EPZ) in the Galle District in 1992 was an important policy measure taken for regionalisation of industrial development. Koggala EPZ is the third EPZ established in Sri Lanka after the first two EPZs in the Western Province, namely; Katunayake and Biyagama. In 1992, Board of Investment (BOI) required a US$ 250,000 minimum investment and that more than 90% of production be exports. Although the factories were granted tax holidays and import duty free concession, there was a long stagnant period following its commencement. Fifteen factories mainly producing garments and plastic ware now occupy the EPZ.

Owing to the recent introduction of incentives by BOI in which investors who employ a minimum of 150 people can obtain an interest free loan of Rs. 20 million repayable in 15 years, another 17 projects including six expansion projects have been approved.

Cargo volume handled in Koggala EPZ for exports accounted for approximately 1,140 TEUs and 1,320 TEUs in 1998 and 1999 respectively, while value added stood at Rs. 1980 million and Rs. 2043 million in the same years.

1.3.3 Tourism

(1) Overview

The tourist arrivals to the country has shown higher growth since 1977 with improved international transport facilities and the positive impact of the open economic policy package. The liberalization of imports and foreign exchange gave further impetus to the growth of the tourist trade, even though the arrivals fluctuated due to the security situation in the country after the peak level of 407 thousand in 1982. Europe has been the major source of traffic followed by Asia and North America. (see Table 1.3.5)

Tourist earnings as a percentage of the services sector income grew over time as indicated in Table 1.3.5 The economic benefits of tourism are not limited to foreign exchange earnings and employment generation. The creation of indirect employment is much higher than the direct employment opportunities. Tourism has contributed to the regional dispersion of modern business activities, thereby involving the rural segments in the development process.

Table 1.3.5 Tourism 1991-1997

(Unit: People)

Item	1991	1992	1993	1994	1995	1996	1997
Total Tourist Arrivals	317,703	393,669	392,250	407,511	403,101	302,265	366,165
Tourist Arrivals by Region							
Europe	196,809	250,035	256,158	258,285	254,730	171,888	218,481
Asia	96,654	114,162	106,668	116,352	118,323	102,558	113,565
North America	11,519	12,954	13,743	15,612	14,565	12,462	15,951
Oceania	9,747	12,363	11,823	12,033	10,254	8,763	11,712
Middle East	3,702	3,540	2,931	3,945	3,819	3,882	4,419
Africa	804	582	516	744	798	2,376	1,533
Latin America	372	372	519	540	612	336	504
Employment in Tourist Industry	64,507	69,096	73,704	84,154	87,360	76,711	82,080
Direct Employment	26,878	28,790	30,710	35,064	36,260	31,963	34,200
Estimated Indirect Employment	37,629	40,306	42,994	49,090	51,100	44,748	47,880
Gross Tourism Receipts							
Rs. Million	6,486	8,826	10,037	11,375	11,569	9,195	12,316
US$ Million	157	201	208	230	226	166	209

Source: Ceylon Tourist Board

(2) Tourism in the Southern Area

The area is favored with beach resorts along the south coast, historical remains of Rohuna Dynasty and Yala National Park. Statistic shows the area has been attracting foreign tourists among other tourism resources. (see Table 1.3.6)

Table 1.3.6 Indicators of Regional Distribution of Tourist Trade

Resort Region	Graded Accommodation Establishments		Accommodation Capacity		Room Occupancy Rate	Foreign Guest Nights	
	No.	%	No.of Rooms	%	%	thousand	%
All Island	158	100.0	12,370	100.0	49.1	2,937	100.0
Ancien Cities	35	22.2	2,252	18.2	47.0	471	16.0
Colombo City	19	12.0	2,798	22.6	54.9	610	20.8
Eas Coast	2	1.3	114	0.9	6.1	2	0.1
Greater Colombo	31	19.6	2,045	16.5	54.7	601	20.5
Hill Country	9	5.7	469	3.8	46.3	102	3.5
South Coast	62	39.2	4,692	37.9	45.2	1,150	39.2

Source: Ceylon Tourist Board

1.3.4 Other Sectors

(1) Energy

Energy sources in Sri Lanka consist of hydropower, petroleum, gas and bio mass, share of which in 1995 stood at 17%, 25%, 1% and 57% respectively. Power generation increased by 8-12% during 1978-96, and helped to maintain a reasonable rate of economic growth.

The demand for electricity increased at an average rate of 8%-10% during 1995-1997, reaching the maximum demand of 1,037 MW in 1997. The total hydro capacity available in the system has remained at 1,137 MW since 1992, while the total thermal capacity increased from 272 MW in 1996 to 405 MW in 1997. As a result the total installed capacity increased to 1542 MW.

Percentage of electrification in the South Province stood at 55% at the end of 1998, slightly above the national average of 52%. In terms of electricity sales in GWh (million kWh) the Province shared 8.3% of the total 4,521 GWh.

(2) Telecommunications

In Sri Lanka, there exist 2.8 fixed telephones per hundred population in 1998, penetration rate going up from 1.0 per hundred population in 1995. Switching capacity increased from 271,250 in 1995 to 543,897 lines in 1998. Participation of private companies in non-basic services, especially in mobile telephone service, has been promoted to meet the rapidly increasing demand. In consequence, the number of cellular mobile phones has increased six fold to 174,202 in 1998 compared to 1994.

Telephone distribution in Southern Province shared only 4.3% in 1996, extremely low when compared with the population distribution of 13.0% in the same year.

1.4 Transportation Sectors

1.4.1 Railway

The railway system in Sri Lanka is at present operated by the Sri Lanka Railways (SLR) as a government department under the Ministry of Transport and Highways. The system has a total track length of 1,447km(1998) of broad gauge and 59km(1998) of narrow gauge. The SLR has 175 locomotives, 1,297 passenger coaches and 2,703 wagons at 1998.[1]

SLR made an effort to provide a better transport service to the public despite its chronic problems such as lack of rolling stock and weak rail track. The operated kilometerage of SLR during 1999 increased by 5% over 1998, while passenger kilometerage also grew by 6%. Meanwhile, freight ton kilometerage reflected a 2% decrease. (see Table 1.4.1) Principal commodities handled by SLR are cement, petroleum products and flour.

The installation of a color light signaling system on the coastline was completed up to Hikkaduwa in 1999. Four new commuter (suburban) train and two new inter city express trains were introduced for the convenience of passengers. Four low-cost rail buses were also put into daily operation.

Rail transport in the southern area is limited to only one line, the coast line, operating between Colombo and Matara. It has a total length of 161km from Maradana Station in Colombo to Matara. The first 27.5km of the line are double track and rest is single track (1997). [2]

Table 1.4.1 Performance of Sri Lanka Railways

Item	Unit	1998	1999(a)
Operated kilometers	'000	8,534	8,964
Passenger kilometers	million	3,206	3,393
Freight ton kilometers	million	108	106

Source: Sri Lanka Economy In 1999 and Medium-term prospects, Central Bank of Sri Lanka
(a) estimates

1.4.2 Roads

Sri Lanka's road system are classified as A to E type as shown in Table 1.4.2. Total road lengths are less than 26,000km in 1999. The road development authority (RDA) is responsible for the development and maintenance of national highways which are A and B type. Other types of roads are under control of Provincial Councils.

[1] Economic And Social Statistics Of Sri Lanka 1999, provincial data.
[2] The Master Plan Study for Southern Area Development in the Democratic Socialist Republic of Sri Lanka

Table 1.4.2 Classes of roads in Sri Lanka

Class	Characteristics
A	Metalled and bitumen surfaced 8 to12 m. Total width 12 to 19 m.
B	Metalled and bitumen surfaced 4 to 6 m. Total width 6 to 8 m.
C	Single carriageway of 4 m. Most are metalled and bitumen surfaced but some are only gravel roads. Total width 7 m.
D	Gravel road 1-2 m wide.
E	Bridle paths and unspecified roads.

Source: Atlas of Sri Lanka

Table 1.4.3 Road net work in Sri Lanka

	A	B	C	D	E	Total
All country(1996)	4,221	6,926	8,457	5,346	554	25,504
Southern province(1999)	352	870	923	711	—	2,856

Source: Road development authority and SPRDA Galle

Motor traffic has shown fairly rapid growth since 1975. And all kinds of motor traffic are continuing to increase in recent years. Total number of motor vehicles with valid revenue licenses has grown by 7% to 657,001 during 1998. The increase in goods transport vehicles licenses was also growing from about 59,396 in 1997 to 61,856 in 1998.[3] The road traffic has become an important mode of transportation compared to railways. The share of road transport of the total volume of freight in 1995 is 86%. The share of railway is only 3%. 11% of share is for pipeline, inland water ways and coastal shipping.

Table 1.4.4 Freight transport by mode (million ton km)

	1985		1995	
	Volume	%	Volume	%
Rail	232	7	137	3
Lorries and truck	2,700	80	3,913	86
Other	463	13	480	11
Total	3,395	100	4,550	100

Source: Fifty years of Sri Lanka's independence a socioeconomic review

The provision of passenger transportation in Sri Lanka is still mainly dominated by the public sector, although private sector participation has been increasing in recent years, especially in bus transportation. A significant development in the private sector bus service was seen in 1998. In the provinces, a total of 11,242 buses were in operation (except in the Northern and

[3] Economic And Social Statistics Of Sri Lanka 1999, provincial data.

Eastern provinces) as at end 1998. This indicated an increase of 19%, as compared to 1997.[4]

Total road lengths are about 2,900km in 1996 in Southern Province. A2 is a main road in Southern Province, which connected Colombo and Wellawaya. This road is a heavy traffic route. It sometimes takes about 3 hours from Colombo to Galle in daytime, which distance is only 115km. A part of this route is four-lane road up to 29km from Colombo.

Motor traffic growth tendency in Southern Province is almost same as whole country. Total number of motor vehicles with valid revenue licenses in the Southern Province has grown by 11% to 79,829 during 1998.[5]

Accordingly, the construction of three expressways was proposed which were Colombo-Katunayake, Colombo- Kandy and Colombo- Matara. The final report of the feasibility study for the Colombo- Matara expressways was finalized and the engineering planning started on June 2000.

1.4.3 Sea Transport

Three ports, namely Colombo, Galle and Trincomalee, provide ship haulage in Sri Lanka. These ports are operated by the Sri Lanka Ports Authority (SLPA), which was established as a government-owned corporation in 1979.

The total number of ship arrivals at three ports increased by 3% to 4,339 during 1999. The total cargo handling volume was 26,995 million tons in 1999 a slight increase from 1998.[6] The detail of the three ports is described in Chapter 2.2, 2.3 and Chapter 4.

Coastal shipping in Sri Lanka is not so vital both passenger and cargo transport except for coastal shipping services for Northern province include Jaffna. Such cargo has been essentially food items and construction material.

1.4.4 Air Transport

Sri Lanka has one modern international airport at Katunayake, about 30km north of Colombo, which was constructed in 1961 with foreign assistance. Modernization and expansion of the airport complex was completed in 1988. The project included the construction of a second runway, expansion of the apron and the construction of fully equipped passenger and cargo terminals.

In 1994 the Colombo International Airport handled approximately 1.6 million passengers and 50,000 tons of airfreight.

Air Lanka, the national carrier, was founded in 1979.Air Lanka carried approximately 1.2

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[4] Central Bank of Sri Lanka Annual Report-1998

[5] Economic And Social Statistics Of Sri Lanka 1999, provincial data.

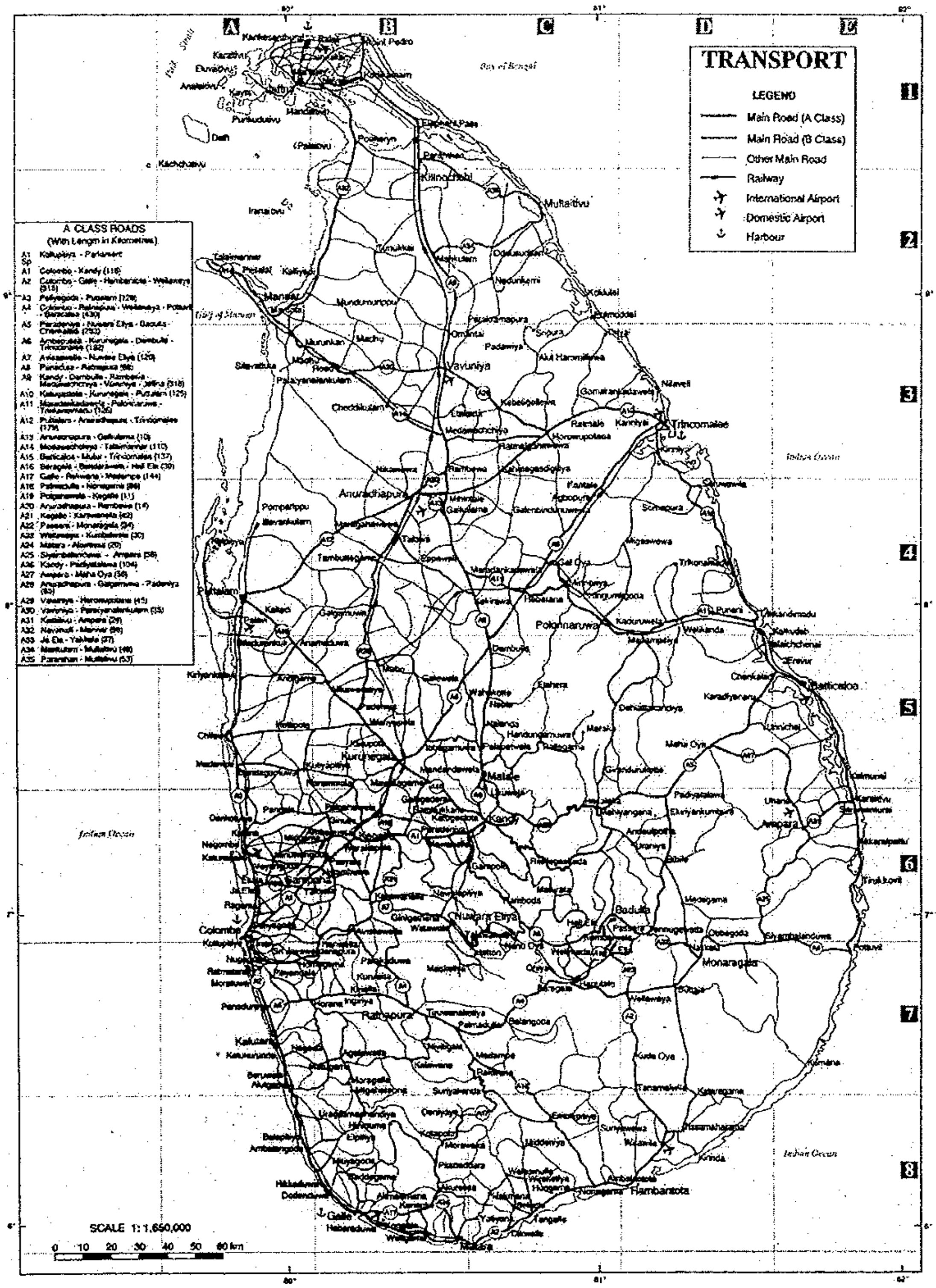
[6] Port statistics 1999

million passengers in 1998

Table 1.4.5 Performance of the air transports (million ton km)

	1994	1995	1996	1997	1998
Passengers(including excess baggage)	331,489	356,231	343,475	389,639	390,941
Freight	109,903	156,715	158,584	173,838	156,471
Mail	6,269	6,235	5,347	5,047	5,795
Total	447,661	519,181	507,406	568,524	553,207

Source: Central Bank of Sri Lanka



Source: Arjuna's Atlas of Sri Lanka

Figure 1.4.1 Transport in Sri Lanka