Report to be laid on the Table of Rajya Sabha

सत्यमेव जयते

AUTHENTICATED

(RAJESH PILOT)
Minister of State for Environment & Forests
New Delhi

REPORT OF THE
COMPTROLLER AND AUDITOR GENERAL
OF INDIA

UNION GOVERNMENT
NO. 16 (COMMERCIAL) OF 1995

ANDAMAN & NICOBAR ISLANDS FOREST & PLANTATION DEVELOPMENT CORPORATION LIMITED

CONTENTS

SL.NO.	CHAPTER	PAGE NO.
	PREFACE	(i) to (ii)
	OVERVIEW	(iii)to(v)
1.	INTRODUCTION	1
2.	OBJECTIVES	3
3.	ORGANISATION	6
4.	CAPITAL STRUCTURE	7
5.	FINANCIAL PERFORMANCE	8
6.	MANPOWER	12
7.	PERFORMANCE ANALYSIS	14
8.	EXPANSION AND DIVERSIFICATION	38
9.	SALES PRICING AND MARKETING	40
10.	INVENTORY CONTROL	46
11.	INTERNAL AUDIT	48
	ANNEXURES I TO X	49-62
	LIST OF ABBREVIATION	63

PREFACE

Audit Boards are set up under the supervision and control of the Comptroller & Auditor General of India (CAG) to undertake comprehensive appraisals of the performance of the Companies and Corporations subject to audit by CAG.

2. The report on Andaman & Nicobar Islands Forests and Plantation Development Corporation Ltd was prepared by an Audit Board consisting of the following members:

1. Sh. C.K. Joseph	Deputy Comptroller & Auditor General (Commercial)-cum-Chairman Audit Board upto 20th March 1995
2. Sh. Ramesh Chandra	Deputy Comptroller & Auditor General (Commercial)-cum-Chairman Audit Board from 6th April 1995.
3. Sh. S.B. Pillay	Principal Director of Commercial Audit & Ex-Officio Member Audit Board, Madras upto 2.6.1995.
4. Sh. R. Parthasarthy	Principal Director of Commercial Audit & Ex-Officio Member Audit Board, Madras from 1.7.1995.
5. Sh. S. Sathyamoorthy	Principal Director of Commercial Audit & Ex-Officio Member Audit Board -IV New Delhi
6. Sh. R. Chandramouli	Assistant Comptroller and Auditor General (Commercial) and Secretary, Audit Board upto 7th May 1995
7. Sh. Jagbans Singh	Assistant Comptroller and Auditor General (Commercial) & Secretary, Audit Board from 6th July 1995

8.	Sh.O.N. Kaul IFS(Rtd.) (Part-time Member)	Ex-Principal Chief Conservator of Forests and Secretary Environment & Forest Deptt, Govt of Mizoram.
9.	Sh. John Joseph, IFS(Retd) (Part-time Member)	Ex-Principal Chief conservator of Forests, Tamilnadu Forest Department.

The part time members are appointed by the Government of India (in the respective Ministry or Department controlling the Company or Corporation) with the concurrence of Comptroller and Auditor General of India.

3. The report was finalised by the Audit Board after taking into consideration the discussions held with the Ministry of Forests & Environment on 24th July 1995.

4. The Comptroller and Auditor General of India wishes to place on record his appreciation of the work done by the Audit Board.

OVERVIEW

I The Andaman & Nicobar Islands Forest & Plantation Development Corporation Limited (ANIFPDC) was incorporated in 1977, with headquarters at Port Blair, for managing production forestry on commercial lines.

(Paragraph 1.2.)

II The Company has been earning profits since its inception in 1977-78. It paid dividend every year from 1978-79, except in 1985-86.

(Paragraph 5.4.)

III Presently, the quantum of timber to be harvested annually is fixed by Government, taking into account ecological factors. The quantity actually harvested exceeded the limits fixed by Government from 1987-88.

(Paragraph 7.1.4.)

IV The Company's Red Oil Palm Plantation programme was curtailed midway in 1986 after 1433 ha of plantation was done against a target of 2400 ha, under the orders of Government of India pending completion of a study of the impact of these plantations on the ecology and environment. The final report of the study is yet to be received.

(Paragraph 7.2.3.)

V Red Oil Palm plantations started yielding fruit from 1980-81 onwards. For want of adequate processing facilities, fruits were wasted during 1987-92. The loss of yield was 2666 MT of oil valued at Rs.423.30 lakhs approximately. Again, the yield of oil was hampered by the absence of proper processing machinery and the loss due to shortfall in recovery of oil was 2190 tonnes valued at Rs.332.25 lakhs (upto 1994-95).

(Paragraphs 7.2.13., 7.2.16. & 7.2.17.)

VI Work for additional facilities for processing oil awarded for execution in 1988 and scheduled for completion by March 1990 was delayed and the mill commissioned only in May 1992.

(Paragraphs 7.2.8. to 7.2.11.)

VII Further cultivation at the Rubber Plantation at Katchal, which is one of the Company's important activities, was stopped in 1985-86 because of restrictions imposed by Government of India under the Forest Conservation Act.

(Paragraph 7.3.4.)

VIII The area tapped and the yield of rubber have been far less than the projections made by the Rubber Board.

(Paragraph 7.3.7.)

IX Currently, the Company's main activity is forestry operations which are confined to 11188 ha in North Andaman and 19600 ha in Little Andaman. It is also maintaining 1593 ha of Red Oil Palm Plantation at Little Andaman and 614.84 ha of Rubber Plantation at Katchal. Other activities include cultivation of spices and farm produce. These have not been significant.

(Paragraphs 7.4.and 1.4.)

X With the restrictions on further expansion of activities in forestry operations, Red Oil Palm and Rubber Plantations, the Company is yet to formulate clear identifiable diversification schemes.

(Paragraphs 8.2 & 2.3. to 2.4)

XI Sales to local industries rose sharply from early 1988 onwards due to a ban imposed by the A&N Administration on export of timber to the mainland without meeting the requirements of local industries.

(Paragraphs 9.1.3. and 9.1.4.)

XII Sales are being made to local industries at concessional rates fixed by the A&N Administration in contravention of the National Forest Policy. The loss of revenue on account of the concessional sales to the local parties during the years 1989-95 amounted to Rs.1111.31 lakhs. Of the revenue loss of Rs.1111.31 lakhs on the local sales, Rs.869.72 lakhs were on account of supplies made to two parties alone. The benefit of concessional prices was, therefore, not available to the local industries as a whole.

(Paragraphs 9.2.3 and 9.2.4)

CHAPTER 1

INTRODUCTION

1.1. Andaman & Nicobar Islands, a Union Territory of India, consisting of a chain of 300 islands and islets, are situated 1200 kms east of the main land and in the south-eastern part of Bay of Bengal. The gross geographical area of these islands is 8293 sq kms. of which 7464 sq. kms. (90%) is covered by forest.

1.2. The National Commission on Agriculture in their Interim Report on "Production Forestry Man-made Forests" (1972), suggested that the forestry sector should contribute to the GNP of the country to the extent of its potentiality, and recommended the establishment of Forest Development Corporations. Based on these recommendations the Andaman Forest Department prepared a Project Report in 1976 for the establishment of a Forest Development Corporation in the Union Territory. After the Project Report was sanctioned by Government on 17th January 1977, the Andaman and Nicobar Islands Forest & Plantation Development Corporation Limited (ANIFPDC) was incorporated on 21st January 1977 at Port Blair.

1.3. The Project Report estimated that out of the 7464 sq kms of forest land, about 6000 sq. kms. were productive forest area. Out of the 200 tree species found in these forests, 44 species had recognised end uses though only 29 species had established themselves finally as ply, match, construction or furniture timber. However, only a dozen species were available in large numbers and in good sizes and which could be called the potential of the islands. The annual sustained yield of commercially usable timber, had been tentatively estimated at about 3,65,000 cubic metres. However, due to the remoteness of the area and difficulties of transport and communications, the project envisaged annual harvesting of 1,20,000 cum in addition to 1,00,000 cum already harvested by the Forest Department, the area of operations being limited to Little Andaman and North Andamans only where infrastructural facilities had developed adequately.

The Ministry stated (July 1995) that due to extra stress on conservation of forests, the annual harvestable yield was revised and refixed at 1,15,000 cum per year of which about 47,500 cum was being harvested by Forest Corporation and the balance by Forest Department.

1.4. In addition to forestry operations, the company has been managing a Red Oil Palm Plantation since 1979 and Rubber Plantations since 1983. The forestry operations are confined to 11,188 hectares (ha) at North Andaman and 19,600 ha at Little Andaman. The Company is maintaining 1593 ha of Red Oil Palm Plantation at Little Andaman and 614.84 ha of Rubber plantation at Katchal.

1.5. The working of the company was reviewed by the Committee on Public Undertakings (COPU) vide their 54th report 1978-79 (Sixth Lok Sabha). The action taken by Government on this Report is available in COPU's Fourth Report 1980-81 (Seventh Lok Sabha).

CHAPTER 2

OBJECTIVES

2.1. The main objectives of the Company are :

1. To provide the necessary infrastructure to harvest and develop forest resources, to promote forest resource based industries, to arrange marketing of timber and other forest resources on the mainland and abroad.

2. To plant, grow, cultivate, produce, and raise plantations of various forest species of proven utility and other agricultural plantation, horticultural crops, medicinal and aromatic plants, and to buy, sell, export, import, process, distribute, or otherwise deal with all kinds of forest crops, natural products, agricultural, plantation and horticultural crops, medicinal and aromatic plants.

3. To carry on the business of planters, cultivators, producers, sellers and dealers in timber, processed or not, and such other products of every description, and to manufacture, dispose of, sell and deal in products of natural forest and forest plantations, agricultural plantation and horticultural crops and medicinal and aromatic plants.

4. To establish, administer, own and run industries for manufacturing forest products, agricultural, plantation and horticultural products, medicinal and aromatic plants.

5. To conduct and contract for training and research connected with the integrated development of forest resources of the islands and cultivation as well as processing of agricultural plantation and horticultural crops, medicinal and aromatic plants.

6. To maintain and improve Wild Life and other natural resources.

2.2. No Corporate Plan had been drawn up till April 1993 when the Board approved a plan for the period 1992-93 to 1996-97. The micro objectives as envisaged in the plan are :

- To harvest and market forest produce particularly timber of proven quality.
- To cultivate oil palm plantation and produce palm oil.
- To cultivate rubber plantation and produce rubber sheet of proven quality.
- To maintain full utilisation of the installed capacity of the plants.
- To strengthen its present sales and distribution facilities to achieve larger market coverage.
- To adopt a rational pricing policy for the products.
- To promote ancillary industries by extending technical assistance and help marketing their products.
- To protect and conserve the forest areas in a comprehensive manner.

The Ministry's approval to the plan has not been obtained (March 1995). During the Audit Board Meeting (July 1995), the Ministry agreed to approve the Corporate Plan formally.

2.3. On the outlook for the future, the Corporate Plan envisages better management of the existing operations in the next five years to achieve optimum results. While approving the plan, one of the Directors had opined that efforts should be made to diversify the activities of the Company and the plan be reviewed to incorporate the same at an appropriate time.

2.4. During discussions with the Audit Board, the Management stated (April 1994) that further expansion of the existing activities was not possible in view of the restrictions imposed by Govt. of India. The only alternative appears to be diversification of the activities of the Company. The Company has, however, no proposal on hand for diversification.

CHAPTER 3

ORGANISATION

3.1. As on 31st March 1995, the Board of Directors consisted of Chairman, Managing Director and 3 Directors. The Principal Chief Conservator of Forests, Andaman and Nicobar Islands Forest Department is the Chairman of the company. The Managing Director is the Chief Executive. The other three Directors are officials nominated by the Government.

3.2. Since the incorporation of the Company in January 1977, the post of the Chief Executive was held by 11 persons whose tenure ranged from 2 months to a maximum period of 36 months. Only one person held the post for 36 months. However, the present incumbent was appointed in 1991 for a tenure of five years.

CHAPTER 4

CAPITAL STRUCTURE

4.1. The Company has an authorised share capital of Rs.600 lakhs. The paid up capital, entirely contributed by the Government of India, as on 31st March 1995 was Rs.359.18 lakhs.

4.2. Of the above, Rs.153 lakhs was contributed for Forestry Operation, Rs.151.23 lakhs for raising Red Oil Palm Plantation and Rs.54.95 lakhs for Rubber Plantation.

4.3. The Company has not availed any long term loans so far (March 1995) and the bulk of the working capital requirements was met out of internal resources except in certain years in which the Company raised secured loan from bank against fixed deposits/hypothecation of specific fixed assets for meeting urgent requirements of working capital. No amount was outstanding on this account as on 31st March 1995.

CHAPTER 5

FINANCIAL PERFORMANCE

5.1 Financial Position

The financial performance of the Company for the six years ended 31st March 1995 is given below:-

(Rupees in lakhs)

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
I. LIABILITIES						
a) Share Capital	325.83	325.83	325.83	325.83	359.18	359.18
b) Reserves & Surplus	408.64	500.93	589.69	775.46	1028.37	1355.01
c)Balance at credit of Ministry of Agriculture(pending adjustment)	33.35	33.35	33.35	33.35	- -	-
d)Secured loans from Bank	-	67.17				
e)Unsecured loan from Bank			8.96			
e)Current liabilities and provisions	1171.38	1068.03	1292.71	595.68	637.82	1909.12
Total I	1939.20	1995.30	2250.54	1730.32	2025.37	3623.31
II. ASSETS						
a)Gross Fixed Assets	514.58	547.79	618.39	919.31	1026.47	1139.62
b)Less:Depreciation	183.22	185.63	198.04	227.37	261.90	304.73
c)Net Fixed Assets	331.36	362.16	420.35	691.94	764.57	834.89
d) Plantation	297.04	284.61	263.26	254.30	239.14	223.98
e)Capital Work in progress	59.67	110.88	257.16	46.82	30.32	9.50
f) Capital Goods in Stock	6.25	17.66	1.22	2.09	1.13	14.22
g) Current Assets Loans & advances	1244.88	1219.99	1308.55	735.17	990.21	2540.72
Total II	1939.20	1995.30	2250.54	1730.32	2025.37	3623.31
III. CAPITAL EMPLOYD	701.90	798.73	699.45	1085.73	1356.10	1690.47
IV .NET WORTH	734.47	826.76	915.52	1101.29	1387.55	1714.19

5.2. The working results of the Company during the years 1989-95 are given below:-

(Rs. in lakhs)

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
I .INCOME Sale of Timber (include lops and tops)	612.99	746.06	972.26	1257.78	1484.08	1435.21
Sale of Palm Oil	84.36	55.65	98.14	160.42	290.41	350.51
Sale of Palm oil Nuts	4.37	2.20	7.88	23.60	13.56	36.27
Sale of Rubber	93.63	110.56	50.21	135.35	95.53	176.32
Sale of Spices	0.57	0.34	1.71	3.35	2.61	3.05
Other Income	16.66	20.47	33.42	76.18	61.87	77.80
Increase/ decrease in stock	(-)34.73	(+)19.46	(+)89.52	(+) 3.19	(+) 1.01	(-) 32.64
Total I	777.85	954.74	1253.14	1659.87	1949.07	2046.52
II Expenditure Purchase of logs		44.81	4.33			
Manufacturing & Operational expenses	447.91	524.56	674 .57	832.99	972.46	1001.11
Administrative and Other expenses	132.76	191.49	213.16	305.05	344.48	373.44
Depreciation	25.82	18.91	18.40	31.67	37.80	44.08
Write off 4% on plantation of Red Oil Palm	14.81	14.90	15.16	15.16	15.16	15.16
Total II	621.30	794.67	925.62	1184.87	1369.90	1433.79
Profit for the year	156.55	160.07	327.52	475.00	579.17	612.73
Prior Period Adjustments-Net	(+)17.75	(+)48.18	(-) 2.97	(+) 1.32	(+)11.73	(+) 6.32
Profit before taxation	174.30	208.25	324.55	476.32	590.90	619.05
Provision for taxation	102.40	94.78	212.98	264.49	310.20	260.10
Profit after tax	71.90	113.47	111.57	211.83	280.70	358.95

While the increase in profit in 1992-93 and 1993-94 was mainly due to increase in the quantum of timber harvested and sold, the increase in 1994-95 was mainly due to the increase in revenue from sale of rubber.

5.3. Project-wise profitability analysis

5.3.1. The projectwise profit (+)/losses (-) for the years 1989-95 is shown below.

(Rs. in lakhs)

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Forestry	202.41	248.31	378.24	507.59	(+) 612.08	(+) 553.55
Red Oil Palm	(-) 28.33	(-) 61.16	(-) 52.63	(-) 43.10	(-) 15.98	(+) 72:47
Rubber	0.22	21.10	(-) 2.43	11.96	(-) 3.64	(-) 5.43
	174.30	208.25	323.18	476.45	592.46	620.59

5.3.2. The Company incurred losses on Red Oil Palm in all the years except 1994-95 when it made a profit of Rs.72 47 lakhs. During the meeting with the Audit Board (July 1995), the Ministry stated that as a result of uncertainty about the future of the Plantation, proper manuring was not done in some of the earlier years which may have caused reduction in the yield in later years. It may be seen from the tables under para 5.2. and 5.3. that the turnover of palm oil for 1992-93 and 1993-94 increased significantly while the project incurred loss. The Company attributed the loss to the following (August 1995).

(i) Increase in operational expenditure due to general inflation .

(ii) Expenditure towards intensive manuring during 1992-93

(iii) Construction of hutments for workers

(iv) Increase in marketing expenditure

(v) Construction of temporary roads and

(vi) Expenditure capitalised in earlier years was now treated as revenue expenditure as these plantations crossed gestation period.

5.3.3. The fluctuations in the profitability of Rubber Plant was attributed by the company (August 1995) to the percentage of scrap formation which depended on site conditions and the weather on the tapping days. Further, remoteness of the area and lack of transportation facilities enhanced the cost of production of rubber in the project.

5.4. **Dividend**

The company paid dividend from 1978-79 except in 1985-86. Dividend at rates ranging from 5.5% to 9% paid during the last six years was as under.

(Rs. in lakhs)

Year	Share capital	Profit	Amount of Dividend	Percentage
1989-90	325.83	71.90	17.92	5.5
1990-91	325.83	113.47	21.18	6.5
1991-92	325.83	111.57	22.81	7.0
1992-93	325.83	211.83	26.06	8.0
1993-94	359.18	280.70	27.79	8.5
1994-95	359.18	358.96	32.32	9.0

On being enquired by the Audit Board as to whether Government of India (GOI) was satisfied with the quantum of dividends received, the Ministry stated (July 1995)that the earnings are being retained by the Company as infrastructure had to be developed and the requirements for working capital were high and a very high dividend in a particular year could put strain on the Company to maintain or increase the level of dividend in the subsequent years.

Regarding the point made by the Audit Board that there was enough cash and the dividend amount could easily be met out of the interest on fixed deposit itself, the Ministry agreed that there was scope for improvement in the working capital management of the company.

CHAPTER 6

MANPOWER

6.1. Harvesting and regeneration operations of the forestry division of the company at Little Andaman and North Andaman and maintenance of plantations of Red Oil Palm and Rubber are done with the Company's own labour as well as by engaging contract labour in certain operations. The table below indicates the sanctioned strength and the men-in-position in different divisions as at the end of the years 1990-1995.

Name of Office/Division (Nos.)	Sanctioned Strength	Utilised /Positioned					
		1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Headquarters, Port Blair incl. Calcutta Liason Office							
Officers & Staff	96	75	83	88	80	90	94
Workers	--	41	42	50	55	62	59
<u>Forestry Divisions</u> <u>Little Andaman</u>							
Officers & Staff	149	128	126	126	135	163	160
Workers	--	385	383	391	436	329	340
<u>North Andaman</u>							
Officers & Staff	63	48	45	45	52	66	62
Workers	--	191	190	190	212	177	178
<u>Red Oil Palm Division</u> <u>Little Andaman</u>							
Officers & Staff	83	73	75	80	92	112	108
Workers	--	518	507	511	537	468	483
<u>Rubber Division</u> <u>Katchal</u>							
Officers & Staff	51	31	33	35	35	47	47
Workers	--	517	511	505	505	452	434

No sanctioned strength fixed for workers.

6.2. Adequacy or otherwise of men in position could not be examined with reference to the Project Reports, as none of the projects had attained the levels envisaged. However, contract labour was also engaged on many operations.Thus, there is a need for assessing the actual requirement of labour in the different projects on a rational basis in order to improve profitability of the operations.

The Ministry stated (July 1995) that deployment of labour in harvesting and natural regeneration was by and large on the pattern prevailing in the Forest Department and that in the Red Oil Palm Plantations it was in accordance with the studies conducted by consultants.

CHAPTER 7

PERFORMANCE ANALYSIS

7.1. Forestry Projects

7.1.1. Salient Features of the Project

Salient features of the project as envisaged in the Project Report were as under :

(In hectares)

		Little Andaman	North Andaman
i)	Geographical area	73,439	1,49,523
ii)	Area cleared of forests for township, settlement, agricultural and plantation crops	2,603	5,106
iii)	Swamps etc.	4,026	17,980
iv)	Unexploitable forests	6,810	18,176
v)	Productive forest area	60,000	1,08,261
vi)	Area of Annual cut adopting a conversion period of 75 years. (Productive forest area/75 years)	800	1,445

7.1.2 According to estimates based on sampling, about 1,20,000 cum of timber was available annually for harvesting in addition to about 1,00,000 cum already being harvested by the Forest Department. The average stock of commercial timber was estimated to be 75 cum per hectare in Little Andaman and with an annual cut of 800 ha, would give a sustained annual yield of 60,000 cum This was later reduced to 600 ha and 45000 cum in order to protect the Onge tribals inhabiting the area. In North Andaman, the estimated yield was 41.5 cum per hectare and an annual cut of 1445 ha would give a sustained annual yield also of 60,000 cum.

The Ministry stated (July 1995) that on ecological considerations, the annual yield available from Andaman forests was refixed by Government at 1,15,000 cum per year, of which the share of the company was 47,500 cum per year from its project areas.

7.1.3. The lease agreement permitting the forestry operations for a period of 30 years was finalised only in 1982. The actual forest areas leased out to the Company, excluding the area declared as "Tribal Reserve" and the areas earmarked for non-forestry purposes, were 11,188 ha in North Andaman and 19,600 ha in Little Andaman. As per terms of the lease agreement, lease rent of Re.1. per ha per annum for the entire area leased out plus contribution of Rs.700 per ha per annum for actual area harvested from the year of commencement of the lease till the year 1979-80 were payable. Thereafter, apart from the lease rent, 50% of the royalty in force was payable upto 1982-83 and full rate of royalty from 1983-84 onwards.

7.1.4. Although the timber available for annual harvest had been estimated at 1,20,000 cum, GOI fixes from time to time the annual permissible quantity to be harvested after considering the impact on the ecology of the Islands. The table below compares the quantity harvested by the company with the limits fixed for each year.

(in cubic metre)

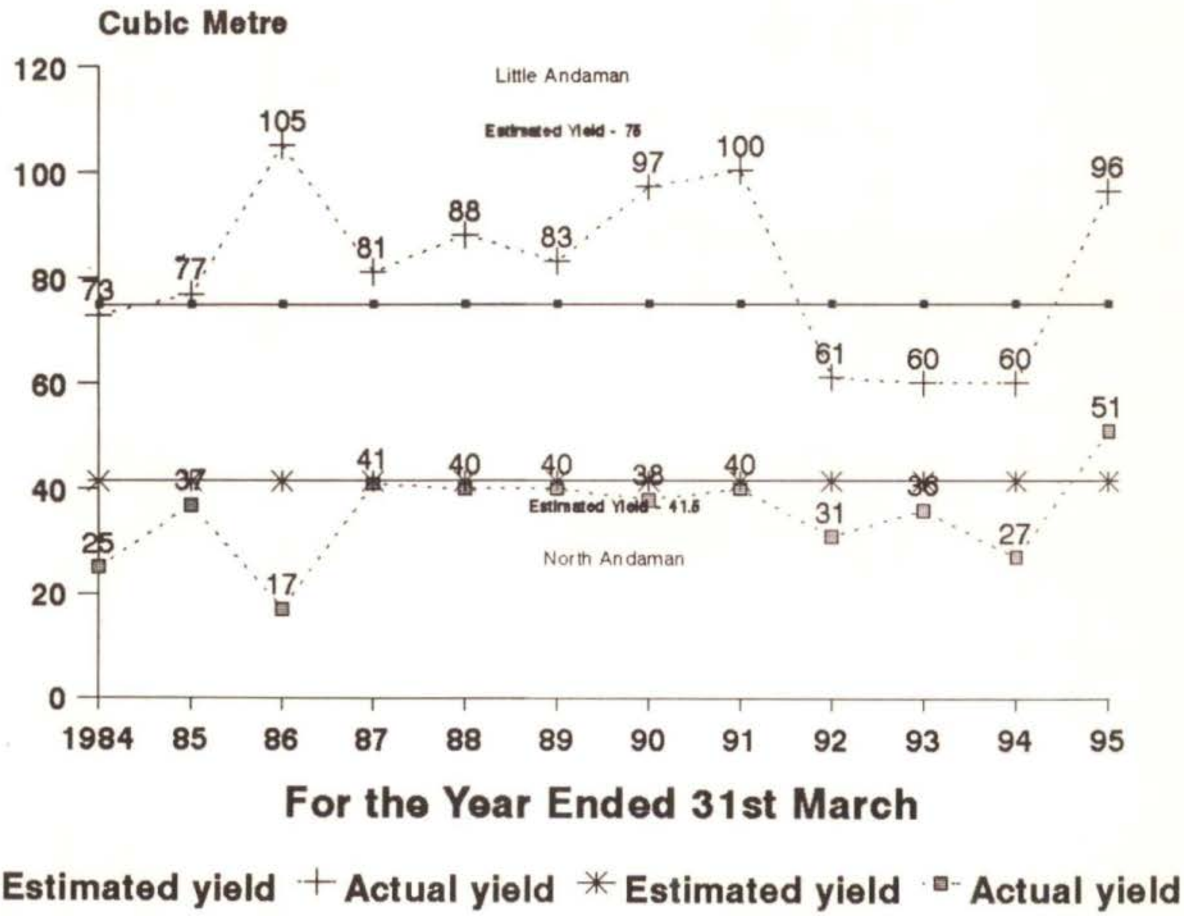
Year	The limits fixed	Quantity actually harvested			% of 5 to 2
		Little Andaman	North Andaman	Total	
1	2	3	4	5	6
1977-78	NA	18673	-	18673	-
1978-79	NA	19557	-	19557	-
1979-80	NA	27413	2130	29543	-
1980-81	NA	24562	823	25385	-
1981-82	NA	22569	1148	23717	-
1982-83	NA	21366	2029	23395	-
1983-84	34000	22004	2225	24229	71
1984-85	30000	19891	4968	24859	83
1985-86	40000	18447	2773	21220	53
1986-87	29500	18165	6644	24809	84
1987-88	28400	20967	9081	30048	106
1988-89	25000	18647	6404	25051	100
1989-90	30000	25377	7519	32896	110
1990-91	30000	23097	10525	33622	112
1991-92	40000	30064	11744	41808	105
1992-93	47500	35126	12519	47645	100
1993-94	47500	35358	13230	48588	102
1994-95	47500	36854	11438	48292	102

The quantity harvested exceeded the limit fixed from 1987-88 onwards.

The Ministry stated (July 1995) that the total cumulative harvest of timber from 1977-78 to 1994-95 did not exceed the total of the limits prescribed for different years. However, it is felt that the cumulative figure over years is not a correct indicator.

7.1.5. On the basis of forest area actually leased out to the Corporation in North Andaman (11,188 ha) and Little Andaman (19,600 ha), the period of lease i.e. 75 years and the estimated yield of commercial timber at 41.5 cum per ha. in North Andaman and 75 cum per ha. in Little Andaman, the timber to be extracted annually works out to 6,200 cum in North Andaman and 19,600 cum in Little Andaman. The actual annual cut and yield of timber since inception in these areas are given in Annexure I. The actual extraction each year exceeded the estimated yield per ha. in most of the years as per graphical presentation given hereunder and Annexure I.

Yield of Commercial Timber

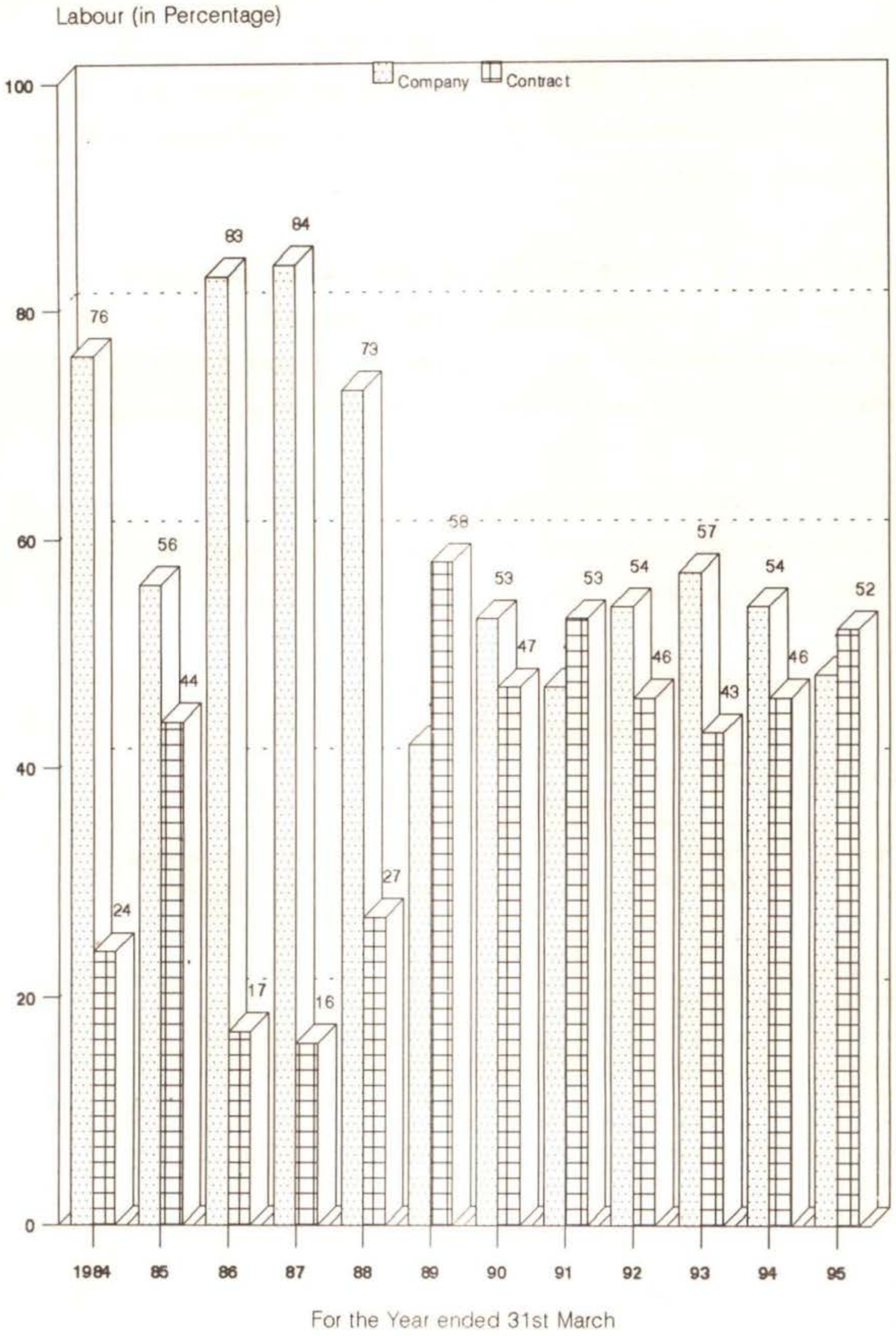


It would be observed that yield per ha remained below estimated yield of 41.5 cum. per ha in respect of North Andaman in all the years, except 1994-95, while yield per ha in Little Andamans was below 75 cum. per ha in the years 1991-92 to 1993-94.

Logging operations

7.1.6 Logging operations are undertaken by the Company using old and conventional methods as well as modern equipment. It involves felling of trees with axe as the more modern chain saw is not suitable for cutting trees in these forests, and then cross cutting with saws.Thereafter, the logs are dragged by elephants and tractors, and hauled by trucks to where they can be shipped. Finally, they are floated as rafts to the mid sea anchor from where they are loaded on to ships. The Company has been employing its own labour as well as contract labour from 1983-84 for these operations. The quantity of timber logged by Company's labour and contract labour is indicated in Annexure II. The bar chart below shows the yearwise position.

Composition of Labour for Logging Operations



7.1.7. Prior to 1983-84, more than 23000 to 29000 cum of timber were logged by the Company. As regards engaging contract labour for the logging operations, the Company stated (July 1990) that with the passage of time, the logging, dragging, transport and other machinery had become old and moreover the transport lead had increased considerably with time and thus, in order to keep up the production target, the Company had to engage contractors.

7.1.8. It may be seen from the above chart that the logging operations by the Company labour as a percentage of total logging operations declined considerably after 1987-88 and remained below 60%. During the years 1988-89, 1990-91 and 1994-95 more than 50 percent of the total quantity of timber was logged by contract labour.

The Ministry stated (July 1995) that only those operations for which the Corporation does not have adequate infrastructure/resources were entrusted to the agency of contractors so as to achieve the annually set targets.

Cost of extraction of timber by contract labour

7.1.9 The cost of extraction of timber by contract labour during the years 1987-88 to 1994-95 is given below:

Year	Quantity harvested by contract (Cum)	Total expenditure on contract labour (Rs. in lakhs)	Expenditure per cubic metre (Rs.)
1987-88	7987	23.33	292
1988-89	14553	33.45	230
1989-90	15504	53.00	342
1990-91	17712	63.00	356
1991-92	19259	65.01	338
1992-93	20643	75.27	365
1993-94	22580	100.03	443
1994-95	25127	103.29	411

The expenditure per cum has gone up from Rs.230 in 1988-89 to Rs.443 in 1993-94 and came down, marginally, to Rs.411 in 1994-95.

7.1.10. The labour contracts were awarded based on tenders and the rates accepted for extraction, transportation and delivery at Export Depot during 1987-95 are shown below.

(in Rupees per cum)

Year	North Andaman		Little Andaman	
	Hard wood	Soft wood	Hard wood	Soft wood
1987-88	350	340	226	-
1988-89	430	420	295	290
1989-90	435	-	320	-
1990-91	415	405	294	284
1991-92	415	405	310	299
1992-93	415	405	333	322
1993-94	503	493	378	369
1994-95	700	690	431	419

7.1.11. Although the rates accepted compare favourably with the cost of logging operations incurred by the Company from year to year, such a comparison and fixation of rate for labour contract on this basis may not be correct as the cost actually incurred by the Company is dependent on various factors like the area/quantity extracted, infrastructure built up, difference in wage structure etc. The quoted rates should have been compared with estimated rates, based on actual working conditions.

7.1.12. In the Revised Project Report for forestry operation (1980) updated upto 1982, the labour charges for logging and transport (Rs.16.50), rafting, rerafting, stevedoring, etc. (Rs.30.00), were in all estimated at Rs.46.50 per cum, taking into account the mandays required for operations, the prevailing wage rates etc. The Company should have made a realistic cost estimation similar to the above for examining the reasonableness of the rates offered by the contractors.

The Ministry stated (June 1995) that the unit costs indicated in the Project Report were generally average rates for the entire project areas and hence could not be applied directly to any specific coupe even if the rates were updated to the current costs.

Disposal of lops and tops

7.1.13 From 1983, based on offers received, non-commercial timber and lops and tops from clear felling operations in revenue area having no commercial value were allowed to be cleared. Although royalty is fixed by GOI, the Company collected royalty ranging from Rs.18 to Rs.50 per cum plus 20% departmental charges, as fixed by itself from time to time. However, in March 1985, Govt. of India fixed the royalty payable at Rs.320 per cum for non-commercial timber (all girth and species) with retrospective effect from 1st April 1983. The rate was reduced to Rs.120 per cum in July 1985. The Company was therefore required to recover from contractors a sum of Rs.10.63 lakhs on the quantity of 14,449 Cum disposed off during 1983-84 and 1984-85. This was however, not done, although there was a stipulation in the Work Order that increase in royalty, if any, was payable as and when required by the Corporation.

The Ministry explained (July 1995) to the Audit Board that the increase in rates could not be recovered by the Company as by that date the parties who removed the lops and tops had sold the timber and in turn were unable to pass on the increase to ultimate consumers. The Company had, however, paid the royalty to the Government at the revised rates. The Ministry agreed that revisions in future would be with prospective effect.

7.2. **Red Oil Palm Project**

7.2.1. With a view to augmenting the oilseed resources of the country, a central team of experts visited Andaman and Nicobar Islands in 1970 and identified the Little Andaman as an excellent location for raising commercial plantation of Red Oil Palm. The Red Oil Palm is the richest source of vegetable oil in the world and the agro-climatic conditions obtaining in the Little Andaman were recognised as extremely favourable for oil palm cultivation. The Project report for raising the plantation in 2400 hectares in the Little

Andaman was drawn up in 1970 which was revised in 1974 and 1976 and approved by the Planning Commission.

7.2.2. The Revised Project Report (October 1976) envisaged raising of Red Oil Palm Plantation over a period of eight years in an area of 2400 ha with a capital outlay of Rs.756.64 lakhs and the setting up of a processing factory with a capacity of 12 MT of fresh fruit bunches (f f b) per hour at a cost of Rs.152 lakhs. In January 1979, GOI sanctioned the plantation components of the project and entrusted the work of raising the plantation to the Company.

Actual Planting and Yield

7.2.3. Earlier, the Andaman Forest Department had raised Red Oil Palm in about 160 ha during 1975-76 and this plantation was taken over by the Company in July 1979. The Company raised the plantation from seeds imported in different years from different countries like Nigeria, Malaysia, Ivory Coast, Papua New Guinea and Zaire in order to have a wider spectrum of genetic variety. Planting operation commenced in 1980-81 and by 1985-86 only 1433 ha were raised as against the target of 2400 ha envisaged in the Project report. The shortfall in plantation was attributed (April 1986) by the management to non-availability of seeds, labour and equipment. The planting was, however, stopped (January 1986) as a matter of policy by GOI pending completion of a study of the impact of these plantations on the ecology and environment. In March 1986, the Central Agricultural Research Institute (CARI) was appointed to undertake a study in this regard and an interim report was received in October 1989. This interim report concluded that a detailed study of another 5 year duration was essential to arrive at any firm and conclusive recommendation.

The Ministry stated (June 1995) that GOI has since decided finally not to extend the area of Red Oil Palm Plantation at the cost of the natural forests on the site.

7.2.4. As against the total capital outlay of Rs.756.64 lakhs on the project, the actual expenditure incurred upto March 1995 was Rs.960.93 lakhs.

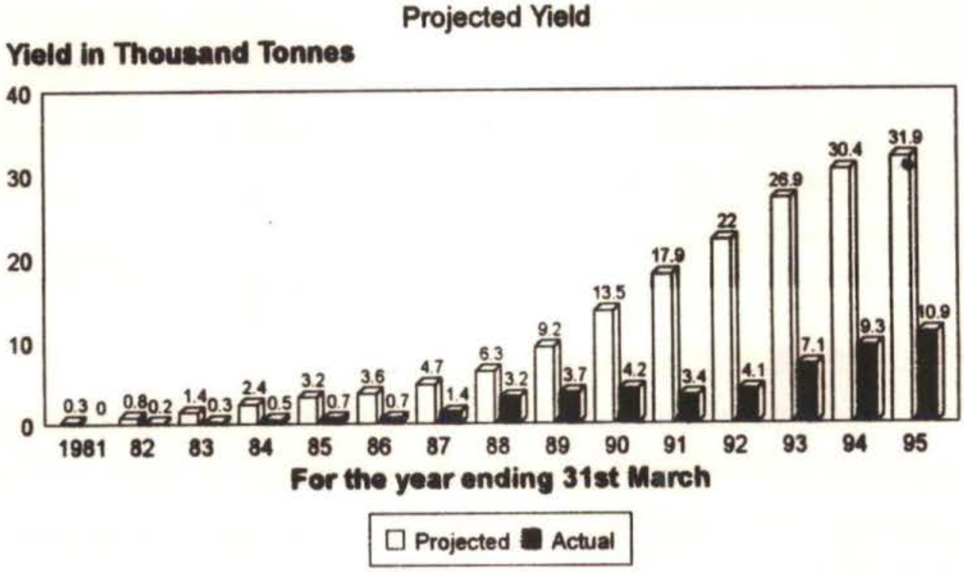
Yield of Fresh Fruit Bunches (FFB)

7.2.5 Oil palm normally starts yielding fruit from 5th year of planting after which the yield gradually increases. As per the Project Report, the palm should yield 2 tonnes of f f b per ha in the 5th year of planting, 5 tonnes in the 6th year, 9 tonnes in the 7th year, 15 tonnes in the 8th year and 20 tonnes between 9th and 30th years. The plantation requires intensive attention like weeding, fertiliser application, frond clearance etc. during the entire period of its life.

In order to obtain the maximum yield from the fruits, it is necessary to harvest the Fresh Fruit Bunches (f f b) in the field at optimum ripe condition. It is also necessary to handle the fruit carefully after it is harvested, and to process them within the shortest possible time. During the peak season, a round is made every 7 to 10 days when the fruit is harvested from the individual trees using bill hooks on stout poles.

After harvesting, the fruits can be processed to yield both palm oil and palm kernel. The kernel can also be processed to extract kernel oil. First the fresh fruit bunches are sterilised when the fruit is cooked, after which they are separated by threshing, passed through a digester, pressed to extract 'liquor', which is then clarified and purified in a centrifuge, dried to bring the moisture content below 0.1% and finally stored. The 'cake' expelled by the press after oil has been extracted, is first processed to remove the nut from the fibre after which the nut can be cracked and the kernel separated and dried and finally bagged and stored. The Company, initially, for want of processing facilities, sold the nuts as such.

7.2.6. The projected yield, as per the Project Report and the quantity of FFB actually collected during the years 1980-1995 are given in Annexure III. The following bar chart shows the position during different years.



7.2.7. The actual collection of fresh fruit bunches during 1980-95 was only 49617 tonnes as against the projected yield of 174543 tonnes that should have been obtained in the plantation during these years. Computed with reference to the projections made in the Project Report, the shortfall in yield during 1980-95 was 24,794 tonnes of oil valued at Rs.4057.95 lakhs. (vide Annexure IV).

The Management stated (April 1994) that it had been confirmed by the various expert teams visiting the Islands that the growth and vigour of the plants in the Plantation was very good in Little Andaman, but the yield was not upto the level projected in the Project Report and in other countries.

The Ministry attributed (July 1995) the lower yield of fresh fruit bunches to its being the first plantation of its kind in the country and the yield in the Project Report being based merely on literature available at that point of time.

Delay in setting up of processing factory

7.2.8 As the oil palm was expected to yield fruits from the 5th year of planting, the Project Report (1976) envisaged installation of one manually operated hydraulic press with a capacity of 0.3 MT of ffb/hr initially, another press of the same type and capacity in 8th year of the project and a regular processing factory with a capacity of 12 MT of ffb/hr to be installed in three stages i.e. in the 9th, 10th and 11th year.

7.2.9. The palms raised in 1975-76 reached the yielding stage from 1980-81 onwards. A village palm oil mill put up by the Company in 1981 was unable to process the yield fully and a pilot palm oil mill with a capacity of 1.5 tonnes ffb/hour was commissioned in May 1985.

7.2.10. In May 1985 and again in September 1986 the Company sought the approval of GOI for establishing a regular oil processing factory with a capacity of 15 tonnes ffb/hr. As further planting was stopped under orders of GOI in January 1986, the proposal was revised (May 1987) to upgrade the capacity of the existing unit from 1.5 tonnes to 4-5 tonnes ffb/hr at an estimated cost of Rs.1.25 crores. The clearance for setting up the same was received only in August 1988.

7.2.11. Meanwhile tenders were invited in February 1987 for upgrading the capacity of the existing mill to 4 tonnes of ffb/hr. Out of four offers received, the offer of Firm 'A' based at Calcutta for Rs.120.97 lakhs was found to be the lowest on technical scrutiny of the tenders by National Industrial Development Corporation (the consultant) and negotiation. Based on this offer, GOI was approached again in April 1988 for according financial sanction for Rs.1.58 crores for execution of the work. By the time GOI approval was received in October 1988, the validity of the offer had already expired in June 1988. The tenderer was called for further negotiations and the Company agreed for payment of escalation subject to a ceiling of 5% of the value of equipment and machinery (Rs.81.43 lakhs). As per the terms and conditions, the work was scheduled to be completed by March 1990. However, it was completed and the mill commissioned only in May 1992.

7.2.12. The total expenditure incurred on the processing factory was Rs.204.03 lakhs. The contractor claimed Rs.9.03 lakhs towards escalation out of which the Company settled an amount of Rs.5.18 lakhs while the balance Rs.3.85 lakhs is under dispute.

7.2.13. In the Annual Report of the Company for 1987-88, substantial quantity of fruit was reported to be going waste as the existing plant was unable to process the entire fruit available. While admitting the wastage of fruit till commissioning of new plant in May 1992, the Management stated (April 1994) that as the projected yield in the Project Report was not based on local condition it may not be indicative of the actual yield from the plantation during that period. They also stated that presently the average yield was 7 MT per hectare varying from 5.5 to 11 MT per hectare depending on the plantation. Even with reference to the lowest recorded yield of 5.5 MT per ha the loss of fruits during

1987-94 worked out to 2666 MT of oil valued at Rs.423.30 lakhs (approximately) vide Annexure V. By timely creation of adequate facilities for processing, the loss could have been avoided.

7.2.14. It was also observed in the above mentioned Annual Report that even after the capacity was expanded to 4 tonnes ffb/hr the Company would be required to instal another factory of about 10 tonnes ffb/hr by 1992, when the entire 1593 ha of plantations would start yielding the fruit. The Revised Project Report (July 1988) prepared for maintenance of the plantation, also mentioned that the processing capacity of 15 tonnes f f b /hr would be required for processing all the fruit during the peak period. The Management stated (April 1994) that the existing 4 tonne mill was adequate to meet about 21000 tonnes of ffb per annum on 3 shift basis and that there was no need for expansion of the capacity in the immediate future.

7.2.15 Again, in the absence of sophisticated high efficiency processing machinery, the yield of oil was also affected from the beginning as brought out in the succeeding paragraph.

Lower yield of oil

7.2.16 The Project Report envisaged the oil yield of fruit bunches at 20% of its weight. However, the actual recovery of oil was far less in all the years as shown below:

Year	Actual fruit yield (in tonnes)	Palm oil required to be produced @ 20% (in tonnes)	Actual production of oil (in tonnes)	Shortage(in tonnes)	Percentage of shortage
1981-82	171	34	14	20	59
1982-83	321	64	25	39	61
1983-84	450	90	39	51	57
1984-85	687	137	75	62	45
1985-86	655	131	84	47	36
1986-87	1413	283	210	73	26
1987-88	3195	639	510	129	20
1988-89	3679	736	560	176	24
1989-90	4215	843	507	336	40
1990-91	3392	678	433	245	36
1991-92	4100	820	562	258	31
1992-93	7124	1425	1266	159	11
1993-94	9347	1869	1525	344	18
1994-95	10868	2174	1923	251	12

7.2.17. Computed with reference to the selling price of oil in the respective years, the shortfall in recovery of oil amounted to 2190 tonnes valued at Rs.332.25 lakhs (Vide Annexure VI).

Recovery of Kernel

7.2.18. As per Project Report, the fresh fruit bunches are expected to yield kernel at 5% which consists of Kernel Palm Oil (2.5%) and Kernel Oil Cake (2.5%) The price of palm kernel was assumed not below 50% of palm oil price. During the years 1986-95, 2491 tonnes of nuts were disposed off for a value of Rs.91.94 lakhs. Asked about the proposal, if any, to set up facility for recovery of kernel oil to improve sales realisation, the Management stated (April 1994) that there was no such proposal at present in view of the higher cost of palm kernel oil extraction and the lower landed cost of imported oil.

7.3 Katchal Rubber Project

7.3.1. The Katchal Rubber Project was approved by Government of India under the Special Area Development Programme and Repatriate Settlement Programme in 1968. The Rubber Board was initially entrusted with implementation of the project till an appropriate agency was established in the Islands. The project originally envisaged planting rubber in 2430 ha but it was confined to 598.84 ha during the period 1968 to 1979. Thereafter, the planting was brought to a temporary stop.

7.3.2. Government of India transferred the project to the Company with effect from 1st April 1983 on the following terms and conditions:

(a) The land allotted to the project and plantation raised thereon were to continue to be the property of the Government of India.

(b) All assets and liabilities of the existing project under the control of the Rubber Board were to be at the disposal of the Company for management and proper exploitation.

(c) The Company was to manage the Rubber Plantation in accordance with the project drawn up by it for the purpose.

(d) The Rubber Board was to continue to provide technical assistance and lend other staff for the management of the project for two years or until the Company recruited its own personnel whichever was earlier.

(e) The Government of India would release a sum not exceeding Rs.51 lakhs during the remaining part of the VI Plan period in the shape of equity shares in accordance with the prescribed procedure and subject to budget provisions being made for this purpose. It was also specified that the company would act as an agent of Government of India for undertaking administration and management of the Rubber Plantation and pay royalty at the same rate at which it pays to

Government in respect of forest areas transferred to the Company for commercial exploitation and management.

7.3.3. Fixed Assets like road, culverts, buildings, machinery and equipments, etc. less liabilities towards gratuity, leave salary, etc. amounted to Rs.33.35 lakhs. The liability was converted as share capital under the orders of Government in March 1994. The plantation on which expenditure of Rs.112.26 lakhs was incurred was taken over at a nominal value of Re.1/- (Rupee one only).

7.3.4. The Company has not so far drawn up a project report for management of the plantation. Against Rs.51 lakhs agreed to be released by Government of India for the project by way of equity, Rs.21.60 lakhs only were received. After the plantation was taken over from the Rubber Board, the Company raised another 16 ha in 1984-85 thus bringing the total area of plantation to 614.84 ha Further planting was stopped because of the restrictions imposed by Government of India under the Forest Conservation Act.

7.3.5. Natural rubber is obtained from the nevea brasiliensis tree and its many high yielding hybrids developed all over the world. It is propagated by seeds and stump budding, the seedlings being first raised in the nursery. The plants require careful tending and manuring during their life.

7.3.6. The table below gives the year of planting and the extent of plantation in different years since commencement of the project in 1968.

Year of Planting	Extent in hectares under different plantations		Total extent (in ha.)
	clonal seedlings	Bud graft	
1968	61.21	0.41	61.62
1969	94.98	5.06	100.04
1970	68.94	-	68.94
1971	-	125.93	125.93
1972	77.73	-	77.73
1973	27.54	19.04	46.58
1974	-	20.00	20.00
1976	-	40.00	40.00
1977	-	50.00	50.00
1979	-	8.00	8.00
1985	-	16.00	16.00
	330.40	284.44	614.84

Area Tapped

7.3.7 Normally tapping of rubber trees can commence after the sixth year of planting. According to a draft Project Report prepared by the Rubber Board in 1981, out of the total area of 598.84 ha, 540.84 ha was expected to be brought under tapping by 1983-84, 590.84 ha during 1984-86 and the entire area from 1986-87 with yield ranging from 561 MT to 855 MT during 1983-84 to 1988-89. However, the actual area tapped and the yield were far less as shown below:

Year	As per Rubber Board Estimates		Actual area tapped (ha)	Actual production (MT)
	Area under tapping (ha)	Estimated production (MT)		
1983-84	540.84	561	230	244
1984-85	590.84	654	295	291
1985-86	590.84	713	479	405
1986-87	598.84	767	479	480
1987-88	598.84	819	496	449
1988-89	598.84	855	497	579
1989-90	598.84	890	497	489
1990-91	598.84	950	507	537
1991-92	614.00*	600	544	547
1992-93	614.00	550	546	571
1993-94	614.00	810	546	601
1994-95	614.00	810	546	402

* includes 16 ha planted by Company in 1985 and due for tapping in 1991-92

Yield

7.3.8. Rubber is made from latex which is the sap which the tree exudes when it is tapped. Tapping is a skilled and technical operation and is done in the early hours of the morning. The latex is run off into cups attached to the tree from where it is periodically collected and sent to the factory for processing, after adding anti coagulants. Due to the remoteness of the plantation and lack of necessary infrastructure, the Company has found it convenient to convert latex into sheets. The process involved is to first dilute the latex to a standard consistency and then to allow the dirt particles to sediment. After drawing out the now clarified latex, it is coagulated using acetic acid or formic acid, washed, sheeted in a `sheeting battery' and finally dried gradually in a `smoke-house'. The dried sheets are visually examined and graded according to prescribed standards. Scrap is also collected from the ground, latex cups, etc. and sold as such. The table below gives the yield per hectare as projected by the Rubber Board and the actual yield per hectare during the years 1983-84 to 1994-95:

Year	Yield per hectare as per Rubber Board (in kg)	Actual yield per hectare (in kg)
1983-84	1037	1060
1984-85	1106	986
1985-86	1206	845
1986-87	1281	1002
1987-88	1368	905
1988-89	1428	1164
1989-90	NA	984
1990-91	NA	1059
1991-92	1029	1005
1992-93	1029	1045
1993-94	1074	1101
1994-95	1074	736

The Management stated (April 1994) that presently the yield was more than 1000 kg per ha which was at par with the national average per ha (1154 kg per ha in 1992-93) despite the limitations in introducing high yielding clones, replanting, remoteness of area, etc. However, in 1994-95 the actual yield was only 736 kg. per hectare against the national average of 1074 kg. per hectare.

Production Performance

7.3.9. The actual production of rubber as compared with the annual targets during the years 1983-84 to 1994-95 was as under:-

(In MT)

Year	Sheet Rubber		Scrap/lump Rubber		Total	
	Target	Actual	Target	Actual	Target	Actual
1983-84	NA	151	NA	93	NA	244
1984-85	NA	177	NA	114	NA	291
1985-86	NA	264	NA	141	NA	405
1986-87	330	277	180	203	510	480
1987-88	425	287	175	162	600	449
1988-89	450	348	150	231	600	579
1989-90	400	298	200	191	600	489
1990-91	450	377	150	160	600	537
1991-92	450	386	150	161	600	547
1992-93	440	422	110	149	550	571
1993-94	450	420	110	181	560	601
1994-95	300	321	100	81	400	402

NA - Not Available

7.3.10. There was shortfall in production of rubber during the years 1986-87 to 1991-92 compared to the targets. The production from 1992-93 onwards was higher than the target. This, however, has to be seen in the light of the fact that in these years the target itself was scaled down significantly. Moreover, the actual production of sheet rubber in all years except 1994-95 remained below target. It was only scrap/lump rubber which offset this deficit in most of the years.

Scrap

7.3.11 Normally, the latex collected contains scrap to the extent of 10-20 per cent by way of tree lace, shell scrap and earth scrap. The percentage of scrap to total production during the years 1983-84 to 1994-95 is given below:-

Year	Total production (MT)	Scrap (MT)	Percentage of scrap to total production
1983-84	244	66	27
1984-85	291	85	29
1985-86	405	92	23
1986-87	480	124	26
1987-88	449	114	25
1988-89	579	124	21
1989-90	489	121	25
1990-91	537	125	23
1991-92	547	116	21
1992-93	571	109	19
1993-94	601	134	22
1994-95	402	81	20

7.3.12. The quantity of scrap was in excess of 20 per cent in all the years except in 1992-93. As against the 18% scrap achieved/mentioned by the Rubber Board in South Andaman, the percentage varied between 19 to 25 in the Company during 1989-95. As scrap fetches only about 30 per cent of the value of rubber sheet on an average, loss on account of excess scrap arising during 1983-95 worked out to Rs.28.57 lakhs which could have been minimised by better management. (Vide Annexure VII).

Lumps

7.3.13. While processing field latex into rubber sheets the quantity that could not be processed immediately for want of chemicals, mechanical problems, etc. is converted into lump. Early lifting and improper collection from the shells are some of the other causes identified by the Company. The quantity so converted into lump can be disposed of only at 40% to 50% of the value of the Rubber Sheet. The table below shows the incidence of lump in production during 1983-95:

Year	Total production(MT)	Lump (MT)	Percentage of lump to total production
1983-84	244	27	11
1984-85	291	29	10
1985-86	405	49	12
1986-87	480	79	16
1987-88	449	48	11
1988-89	579	107	18
1989-90	489	70	14
1990-91	537	35	7
1991-92	548	45	8
1992-93	571	40	7
1993-94	601	47	8
1994-95	402	Nil	Nil

The Company attributed the following reasons for the delay in processing and consequent arising of lumps.

(i) Frequent/prolonged rainfalls hampering collection of latex.

(ii) non-availability of acid and other chemicals

The Ministry (July 1995) admitted that the proportion of scrap and lump put together exceeded in all the years the general average of 25% fixed by the Rubber Board.

7.4. <u>Spices and farm products cultivation</u>

7.4.1. The proposal for spices cultivation was approved in April 1980 and 21 hectares of land was set apart for cultivation of spices in Little Andaman. The spices cultivated are mainly black pepper, cinnamon and cloves. Farm products like coconuts, arecanuts, bananas etc. are also grown.

7.4.2. The details of production, sales, expenditure on cultivation and revenue earned are given below:

Year	Quantity produced (in kg)	Quantity sold	Expenditure on cultivation	Revenue earned
			(Rs. in lakhs)	
1980-81	-	-	1.11	Nil
1981-82	-	-	1.15	Nil
1982-83	80	80	0.98	0.01
1983-84	1051	493	1.08	0.10
1984-85	310	560	1.37	0.10
1985-86	641	322	1.54	0.11
1986-87	779	779	1.39	0.32
1987-88	298	298	1.00	0.30
1988-89	299	294	1.58	0.45
1989-90	285	285	1.62	0.59
1990-91	281	281	2.08	0.34
1991-92	472	185	1.91	1.71
1992-93	502	700	2.63	3.35
1993-94	302	623	2.64	2.61
1994-95	239	277	2.71	3.05

Note:The quantity produced and sold in kg does not include farm products.

7.4.3 It may be seen from the above that the revenue realised was not commensurate with the expenditure incurred in cultivation till 1991-92 when the project became viable for the first time. On the prospect of bringing more area under cultivation, Management stated (April 1994) that it was not possible in view of the ban on plantation in forest area.

CHAPTER 8

EXPANSION AND DIVERSIFICATION

8.1. Expansion of existing activities

With the restriction on further expansion of the existing activities in the forestry operations, Red Oil Palm and Rubber Plantations, the Company has uncertain future as it has no concrete diversification projects in hand.

8.2. Proposed Diversification activities

8.2.1. The only proposal considered by the Company for diversification was in 1986 for establishing coir and rubber based industries in the Islands.

8.2.2. While examining the proposal for the above diversification, it was felt by the Board that the existing 614 ha of rubber plantation would not be sufficient to feed the proposed rubber based industries. In order to see that there was no adverse impact on soil condition by planting rubber, the Company felt then that CARI should be approached for an opinion on this effect, so that, thereafter the Government could be approached for permission to expand the existing plantation.

8.2.3. In the meanwhile, based on tenders called, the National Industrial Development Corporation (NIDC) was entrusted (June 1987) with the preparation of feasibility reports for coir and rubber based industries which would manufacture articles like coir rope, coir mattresses, coir mats, rubberised coir mats, hawai chappals etc., in the Islands. The fee payable was Rs.2.75 lakhs plus traveling and out of pocket expenses limited to Rs.25000/-

8.2.4. Draft Projects Reports involving capital outlays for the coir units at Rs.84.35 lakhs, coconut based industries at Rs.107.20 lakhs and rubber based industries Rs.134.04 lakhs were received in March/April 1988. A committee was thereafter constituted in July 1988 by the Andaman and Nicobar Administration to study these reports and make its recommendations within two months. The formal approval of the reports was, however, received from the Committee in December 1991 only. Follow up action on these reports is yet to be taken up by the Company (March 1995).

The Ministry informed the Audit Board (July 1995) that the Company had no diversification plans as the margins of profit were very low and the scales of operation were not economically viable in areas where diversifications had been envisaged earlier.

CHAPTER 9

SALES PRICING AND MARKETING

9.1. Sales Performance

9.1.1. The sales performance of the company in respect of three major products viz. timber, palm oil and rubber during the last six years is given below:-

(Value - Rs. in lakhs)

	Timber		Palm oil		Rubber	
	Qty. (Cum)	Value	Qty. (MTs)	Value	Qty. (MTs)	Value
1989-90	30147	612.99	660.5	84.36	303	64.60
1990-91	30868	746.06	344.7	55.65	442	88.27
1991-92	36241	972.26	532.0	98.14	189	38.49
1992-93	43807	1276.07	854.0	160.42	529	129.08
1993-94	48575	1476.95	1833	269.34	300	76.34
1994-95	42360	1435.31	1827	315.78	452	157.58

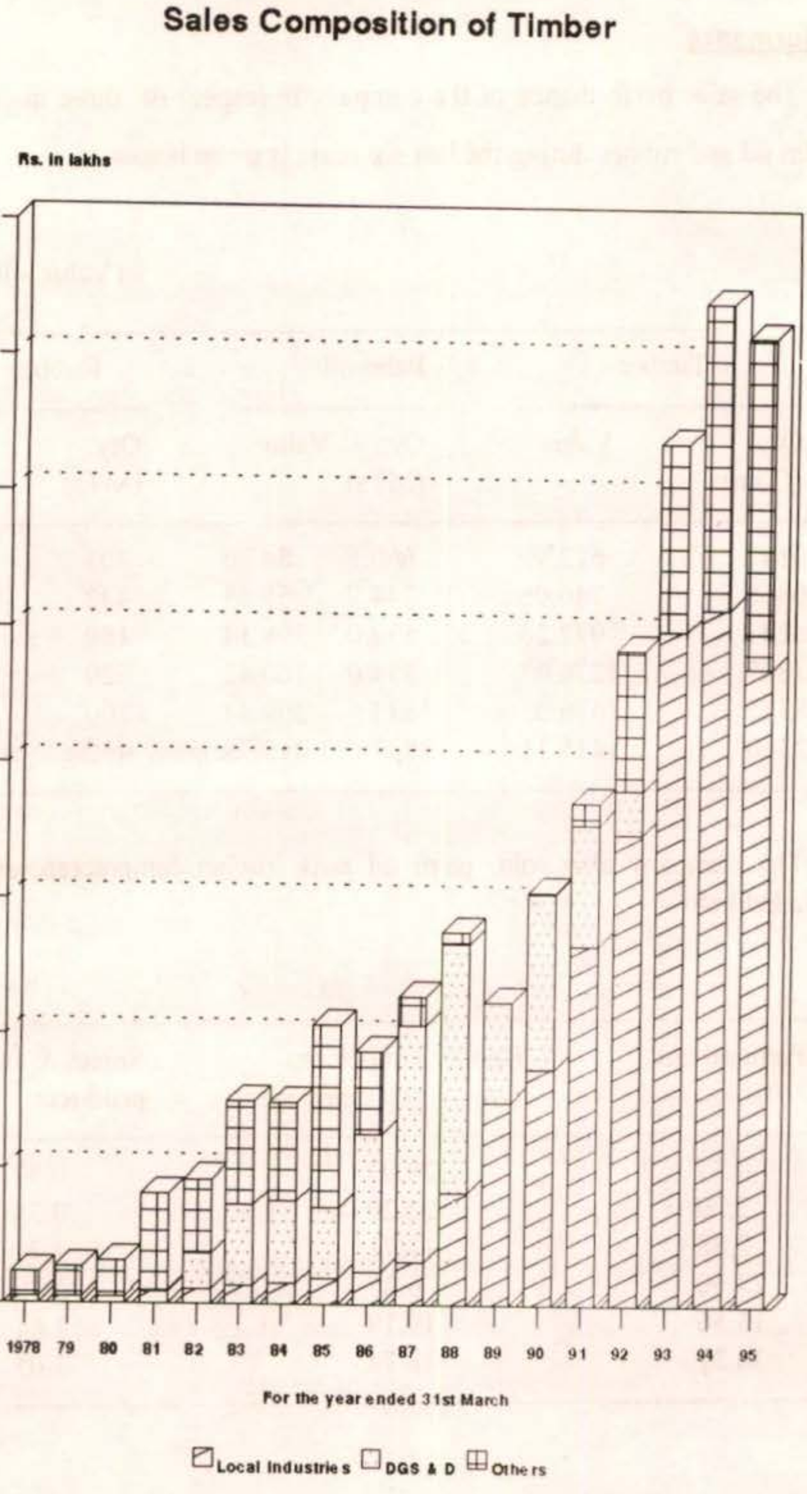
9.1.2. The company also sold, palm oil nuts, rubber lump/scrap, spices, farm products as detailed below:

(Rs. in lakhs)

	Palm oil nut	Rubber lump/scrap	Spices & farm products
1989-90	4.37	29.03	0.57
1990-91	2.20	22.29	0.34
1991-92	7.88	11.71	1.71
1992-93	23.60	6.27	3.35
1993-94	13.56	19.19	2.61
1994-95	36.27	18.74	3.05

Sales Composition and Pricing Policy of Timber

9.1.3 The timber extracted is sold to DGS&D, local industries etc. Composition of sales during the year 1977-95 is given in Annexure VIII. The following graph indicates the position.



9.1.4. Sales to others were made by calling tenders or auction and the buyers were mostly from mainland. These sales constituted a major portion upto 1984-85, thereafter, sales to DGS&D had a dominant share upto 1987-88, which were mainly meant for Railways.From 1988-89, the local industries had the lion's share in the market in view of a ban on export of timber imposed by the A&N Administration from early 1988.Sale to outside agencies was permitted only after meeting the requirements of the local wood-based industries. Consequently, DGS&D supplies came down from 1988-89 and no contracts were concluded with DGS&D from 1991 onwards.

The Ministry informed(July1995) that there was a complete ban on export of timber to mainland from February 1995.

9.2. Pricing Policy

9.2.1. Supply to DGS&D customers (mainly Railways) is made at prefixed rates by the Company. In the case of local industries, other than two industries promoted by the Company itself, though the supply was required to be made at mutually agreed rates between the Company and the wood based local industries as per terms of lease agreement entered into with the Govt. of India, the prices were fixed by A&N Administration from time to time. Allotments of quantity to be supplied by the Company to the local industries are also made by the A&N Administration. The rates for industries promoted by the Company were fixed once in three years as per terms of the agreement entered into with those industries. These are now fixed on par with the selling prices fixed by the A&N Administration for supply to other local industries.

9.2.2. Selling prices fixed for local industries were concessional. The National Forest Policy framed in December1988 stipulated that the practice of supply of forest produce to industry at concessional price should cease. Though the Company took up the matter with the A&N Administration in March 1989 for fixing the selling prices of timber to the local industries at market rate/DGS&D rate, it continued to supply at the concessional prices in the absence of any directions to the contrary, in violation of the

Government Policy. Computed with reference to the selling prices of species of timber which were in demand by DGS&D, the loss of revenue on account of the concessional sales during 1989-95 amounted to Rs.1111.31 lakhs vide Annexure IX. The loss involved in sale of other species could not be ascertained as comparative market prices were not readily available.

The Ministry stated (July 1995) that the prices fixed by the A&N Administration had an inbuilt margin of 30% pre tax return. The Ministry agreed to consider further increase in prices in the next negotiation.

9.2.3. During review of the sales to local industries it was seen that a major portion of sales was made to two private industries. Sales made to these parties in relation to the local industries during the years 1987-88 to 1994-95 were as under:

(Value - Rs. in lakhs)

Year	Total sales to local industries		Sales to two parties		Percentage to total sales
	Qty. (Cum)	Value	Qty. (Cum)	Value	Value
1987-88	12484	166.90	4166	81.69	49
1988-89	18483	302.30	10229	211.98	70
1989-90	21330	351.00	11782	174.49	50
1990-91	24887	534.00	18754	453.65	85
1991-92	28931	699.59	23704	585.77	84
1992-93	36051	1001.86	28668	808.45	81
1993-94	36690	1035.34	24794	678.56	66
1994-95	32453	948.23	20822	614.15	67

9.2.4. Thus bulk of the sales were made to these two parties and out of the revenue loss of Rs.1111.31 lakhs during 1989-95 mentioned in para 9.2.2., nearly Rs.869.72 lakhs (vide Annexure X) were due to the supply made to them. Thus, the beneficiaries of concessional prices were mainly these two parties and not the local industries as a whole. The Ministry stated (June 1995) that the demand of the local industry was being fully met by the Company and the Forest Department put together.

9.2.5. In April 1990, a high level committee was constituted by Government of India to go into the details of price fixation and lay down guidelines for the price fixation committee to be set up by the A&N Administration for the purpose of fixation of price for the timber being supplied to industries in the Islands. Recommendations of the Committee are still awaited (July 1995).

9.3. Sundry Debtors

9.3.1. The table below indicates the position of sundry debtors during the last five years:

(Rs.. in lakhs)

As on 31st March	Total sales	Sundry Debtors	Debtors in terms of month's sales
1991	914.81	140.04	1.8
1992	1130.19	19.09	0.2
1993	1598.80	189.31	1.4
1994	1886.20	143.58	0.91
1995	2001.35	110.40	0.66

9.3.2. An analysis of debts outstanding for more than one year as on 31st March 1995 is given below:

(Rs. in lakhs)

	Govt. Dept.	Others	Total
1. Debts over one year but less than 2 years	4.22	-	4.22
2. Debts outstanding for over 2 years but less than 3 years	0.22	-	0.22
3. Debts outstanding for 3 years and above	1.66	4.73	6.39
	6.10	4.73	10.83

9.3.3. The debts outstanding for over three years include a sum of Rs.4.67 lakhs due from firm 'B', one of the forest based industry in the Islands. The dues relate to the period 1982-1987 towards the supply of logs. The party refused to make the payment on the ground that the prices were revised. The case was referred to Arbitration in May 1989, which is still pending (August1995). The factory was closed in December 1986.

The Company stated (September 1994) that Arbitration Award has not been received since the firm did not participate in the Arbitration proceedings and legal notice had been served through Standing Counsel to release the payment receivable from the party.

CHAPTER 10

INVENTORY CONTROL

10.1. The table below indicates the comparative position of inventory as at the end of the last six years.

(Value - Rs. in lakhs)

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Timber	83.16	104.75	148.72	113.71	113.43	142.03
Red Oil Palm/ sludge	--	15.91	22.86	74.47	40.04	25.52
Palm oil nuts	--	1.56			10.10	1.70
Rubber	12.99	0.03	40.90	17.82	39.31	11.38
Rubber scrap	0.29	0.04	0.42	10.33	7.16	4.55
WIP (Rubber)	8.39	1.57		-	7.48	-
Stores & Spares	75.89	79.67	92.05	94.34	79.01	96.49
Spices	0.25	0.69	1.16	0.93	0.74	0.45
	180.97	204.22	306.11	311.60	297.27	282.12

10.2. The inventory levels of important items were as under:

	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Timber (month's sale	1.6	1.7	1.8	1.1	0.9	1.2
Red Palm Oil (month's sale)	-	3.4	2.8	5.6	1.4	0.9
Rubber (month's sale)	2.4	-	12.7	1.7	6.9	0.9
Rubber scrap/ lump (month's sale)	0.1	-	0.4	19.9	6.2	2.9
Stores and spares (month's consumption)	37	50	20	17	11.4	16.3

10.3. Norms for inventory levels have not been fixed. However in respect of stores and spares, the inventory level seemed to be high. Most of the items of stores and spares are procured from mainland with considerable lead time and therefore for exercising proper control of inventory, ABC analysis for general stores and VED (vital, essential or desirable) analysis for spare parts are envisaged in the stores manual (1981) of the Company. However, such analysis was not being done. The Company has also not fixed maximum, minimum or reordering levels for its stores and spares. The Company stated (August 1990) that ABC and VED analysis were meant for inventory control in organisations where material formed major part of production and had a definite relation to cost of production. Hence, such an analysis would be theoretical and a futile exercise in so far as their Company was concerned. The reply is not convincing as there is no denying the need for a scientific approach of the management of inventories.

The Ministry stated (June 1995) that considering the remoteness of the project areas and the non-availability of stores nearby, it becomes necessary to keep a sizeable quantity of stores in stock and the possibility of reducing the stock level to minimum is being explored through various scientific methods prescribed for the purpose.

10.4 Stores Manual also provides that apart from usual physical verification, periodical inspection of stores shall be made by a responsible officer who shall submit a report for surplus/obsolete stores to the authority competent to issue orders for their disposal. The procedure prescribed was not followed.

CHAPTER 11

INTERNAL AUDIT

11.1. The company has not prepared an Internal Audit Manual defining the scope and functions of the Internal Audit.

11.2. Due to paucity of staff, only a testcheck of the transactions of the units is conducted in Internal Audit presently. The systems and procedures are also not subject to periodical review. The Internal Audit Reports are not being placed before the Board of Directors periodically. The Statutory Auditors of the company have been repeatedly pointing out since 1978-79 that the company's Internal Audit is not commensurate with the size and nature of its business and that the area and extent needs to be suitably increased.

The Ministry stated (June 1995) that a draft Internal Audit Manual defining the scope and function of the Internal Audit Dept. had been prepared and is being put up for Board's approval.

R Chandra

New Delhi
The 27 दिसम्बर DEC 1995

(RAMESH CHANDRA)
Deputy Comptroller and Auditor General - cum-Chairman, Audit Board

Countersigned

New Delhi
The 02 JAN 1996

(C.G. SOMIAH)
Comptroller and Auditor General of India

CHAPTER II

INTERNAL AUDIT

[illegible]

[illegible]

[illegible]

[illegible]

(T.C. SOMAIAH)
Comptroller and Auditor General of India

New Delhi
The [illegible]

ANNEXURE I

FORESTRY OPERATIONS

Particulars of actual area harvested and yield during different years
(Para 7.1.5.)

	LITTLE ANDAMAN			NORTH ANDAMAN		
Year	Actual area harvested (ha)	Total yield (cum)	Yield per ha (cum)	Actual area harvested (ha)	Total yield (cum)	Yield per ha. (cum)
1977-78	254	17427	69	-	-	-
1978-79	290	19557	67	-	-	-
1979-80	365	27413	75	55	2130	39
1980-81	328	24562	75	68	823	12
1981-82	310	22569	73	81	1148	14
1982-83	285	21366	75	63	2029	32
1983-84	302	22004	73	88	2225	25
1984-85	257	19891	77	135	4968	37
1985-86	176	18447	105	160	2773	17
1986-87	223	18165	81	163	6644	41
1987-88	238	20967	88	225	9081	40
1988-89	225	18647	83	161	6404	40
1989-90	262	25377	97	200	7519	38
1990-91	232	23097	100	262	10525	40
1991-92	489	30064	61	375	11744	31
1992-93	583	35126	60	348	12519	36
1993-94	590	35358	60	494	13230	27
1994-95	382	36854	96	224	11438	51

ANNEXURE II

Particulars of Logging Operations (Para 7.1.6.)

(in cubic metre)

Year	Total quantity logged	Quantity logged by co.'s labour	Percen-tage to total quantity	Quantity logged by contract labour	Percen-tage to total quantity
1983-84	24229	18406	76	5823	24
1984-85	24859	13986	56	10873	44
1985-86	21220	17552	83	3668	17
1986-87	24809	20825	84	3984	16
1987-88	30048	22061	73	7987	27
1988-89	25051	10498	42	14553	58
1989-90	32896	17392	53	15504	47
1990-91	33622	15910	47	17712	53
1991-92	41808	22549	54	19259	46
1992-93	47645	27003	57	20642	43
1993-94	48588	26008	54	22580	46
1994-95	48292	23165	48	25127	52

ANNEXURE III

RED OIL PALM PROJECT

Particulars of projected yield as per Project Report and actual yield during different years (Para 7.2.6.)

Year	Area planted (ha)	Projected yield per ha (tonnes)	Total projected yield (tonnes)	Actual collection (tonnes)	Short-fall (tonnes)
1980-81	160	2	320	Nil	320
1981-82	160	5	800	171	629
1982-83	160	9	1440	321	1119
1983-84	160	15	2400	450	1950
1984-85	160	20	3200	687	2513
1985-86	160 180	20 2	3560	655	2905
1986-87	160 180 300	20 5 2	4700	1413	3287
1987-88	160 180 300	20 9 5	6320	3195	3125
1988-89	160 180 300 300	20 15 9 2	9200	3679	5521
1989-90	160 180 300 300 365	20 20 15 5 2	13530	4215	9315
1990-91	160 180 300 300 365 288	20 20 20 9 5 2	17901	3392	14509
1991-92	160 180 300 300 365 288	20 20 20 15 9 5	22025	4100	17925

Year	Area planted (ha)	Projected yield per ha (tonnes)	Total projected yield (tonnes)	Actual collection (tonnes)	Shortfall (tonnes)
1992-93	160	20			
	180	20			
	300	20	26867	7124	19743
	300	20			
	365	15			
	288	9			
1993-94	160	20			
	180	20			
	300	20	30420	9347	21073
	300	20			
	365	20			
	288	15			
1994-95	160	20			
	180	20			
	300	20	31860	10868	20992
	300	20			
	365	20			
	288	20			
			174543	49617	124926

ANNEXURE IV

RED OIL PALM PROJECT

Worksheet showing loss of yield (Para 7.2.7.)

Year	Quantity of shortfall of fresh fruit bunches (in MT)	Quantity of shortfall of oil at 20% on (2) (in MT)	Selling price of oil per MT (in Rs)	Loss (Rs. in lakhs) (3 x 4)
(1)	(2)	(3)	(4)	(5)
1980-81	320			
1981-82	629			
1982-83	1,119	224	7,804	17.48
1983-84	1,950	390	8,292	32.34
1984-85	2,513	502	9,001	45.19
1985-86	2,905	581	8,332	48.41
1986-87	3,287	657	10,956	71.98
1987-88	3,125	625	15,095	94.34
1988-89	5,521	1,104	13,234	146.10
1989-90	9,315	1,863	12,773	237.96
1990-91	14,509	2,901	16,147	468.42
1991-92	17,925	3,585	18,439	661.04
1992-93	19,743	3,949	18,785	741.82
1993-94	21,073	4,215	15,200	640.68
1994-95	20,992	4,198	20,300	852.19
		24794		4057.95

ANNEXURE V

RED OIL PALM PROJECT

Worksheet showing loss of yield (Para 7.2.13.)

Year	Quantity of shortfall of fresh fruit bunches (in MT)	Quantity of shortfall of oil at 18% (in MT)	Selling price of oil per MT (in Rs)	Loss (Rs. in lakhs) (3 X 4)
(1)	(2)	(3)	(4)	(5)
1987-88	325	59	15,095	8.91
1988-89	1491	268	13,234	35.47
1989-90	2963	533	12,773	68.08
1990-91	5370	967	16,147	156.14
1991-92	4662	839	18,439	154.70
		2666		423.30

ANNEXURE VI

RED OIL PALM PROJECT

Worksheet showing loss due to shortfall in recovery of palm oil (Para 7.2.17.)

Year	Quantity of shortfall of oil (in MT)	Selling price of oil per MT(in Rs)	Loss (Rs. in lakhs) (2 x 3)
(1)	(2)	(3)	(4)
1981-82	20	7,804	1.56
1982-83	39	7,804	3.04
1983-84	51	8,292	4.23
1984-85	62	9,001	5.58
1985-86	47	8,332	3.92
1986-87	73	10,956	8.00
1987-88	129	15,095	19.47
1988-89	176	13,234	23.29
1989-90	336	12,773	42.92
1990-91	245	16,147	39.56
1991-92	258	18,439	47.57
1992-93	159	18,785	29.87
1993-94	344	15,200	52.29
1994-95	251	20,300	50.95
	2190		332.25

ANNEXURE VII

KATCHAL RUBBER PROJECT

Work sheet showing cost of excess scrap and resulting loss
(Para 7.3.12)

Year	Actual Production (MT)	Actual scrap (MT)	Normal scrap 20% (MT) (2x20%)	Excess scrap (MT) (3-4)	Cost per MT (Rs. in lakhs)	Total cost of excess scrap (5x6)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1983-84	244	66	49	17	0.16	2.72
1984-85	291	85	58	27	0.16	4.32
1985-86	405	92	81	11	0.16	1.76
1986-87	480	124	96	28	0.14	3.92
1987-88	449	114	90	24	0.16	3.84
1988-89	579	124	116	8	0.18	1.44
1989-90	489	121	98	23	0.21	4.83
1990-91	537	125	107	18	0.20	3.60
1991-92	547	116	109	7	0.20	1.40
1992-93	571	109	114	-	-	-
1993-94	420	134	84	50	0.25	12.50
1994-95	402	81	80	1	0.48	0.48
						40.81
	Less Average scrap realisation (30%)					12.24
	Loss					28.57

Actual production & cost per MT source: annual accounts

ANNEXURE VIII (Para 9.1.3.)

SALES COMPOSITION OF TIMBER

(Qty. in cubic metres)
(Value in Rs. in lakhs)

Year	Sales to local industries		Sales to DGS & D		Sales to others		Total Sales	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
1977-78	3812	9.08	-	-	12619	35.96	16431	45.04
1978-79	4086	9.50	-	-	14113	44.47	18199	53.97
1979-80	4176	10.01	-	-	13987	52.19	18163	62.20
1980-81	5776	16.25	350	2.76	18855	143.53	24981	162.54
1981-82	5821	20.94	4958	53.03	14381	111.07	25160	185.04
1982-83	6919	25.99	7366	121.93	11790	153.90	26075	301.82
1983-84	7924	30.58	6672	122.13	10637	147.58	25233	300.29
1984-85	6630	38.44	5847	106.04	12859	270.51	25336	414.99
1985-86	7067	47.41	9273	205.52	6230	123.64	22570	376.57
1986-87	7567	63.56	14125	351.55	2611	42.44	24303	457.55
1987-88	12484	166.90	13424	369.62	1428	16.95	27336	553.47
1988-89	18483	302.30	4952	147.49	Nil	Nil	23435	449.79
1989-90	21330	351.00	8486	260.00	331	2.00	30147	613.00
1990-91	24887	534.00	4077	180.00	1904	32.06	30868	746.06
1991-92	28931	699.59	1075	65.83	6235	206.84	36241	972.26
1992-93	36051	1001.86	-	-	7756	274.21	43807	1276.07
1993-94	36690	1035.34	-	-	11885	448.74	48575	1484.08
1994-95	32453	948.23	-	-	9907	486.98	42360	1435.21

ANNEXURE IX

Working Sheet showing Loss of Revenue
due to Sale of Timber to Local Industries (Para 9.2.2.)

Year	Species in demand by DGS&D	Quantity supplied to local industries (in cum)	DGS&D Rate per cum (average) (in Rs.)	A&N Admn. Rate per cum at which sold to local industries (in Rs.)	Rate difference per cum (4) - (5) (in Rs.)	Loss of Revenue (3) x (6) (Rs. in lakhs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1989-90	Gurjan	9,333	3402.50	2190.00	1212.50	113.16
	Badam	1,017	2362.50	2040.00	322.50	3.28
	W/Chuglam	1,025	2241.50	2040.00	201.50	2.07
	Poon	6	2362.50	1870.00	492.50	0.03
	Mohwa	163	2362.50	1870.00	492.50	0.80
	Thingam	60	2362.50	1870.00	492.50	0.30
						119.64
1990-91	Gurjan	13,409	3530.00	2730.00	800.00	107.27
	Badam	1,906	2472.00	2346.00	126.00	2.40
	Poon	26	2472.00	2150.00	322.00	0.08
	Mohwa	268	2472.00	2150.00	322.00	0.86
	Thingam	64	2472.00	2150.00	322.00	0.21
						110.82

(1)	(2)	(3)	(4)	(5)	(6)	(7)
1991-92	Gurjan	14,307	3565.00	3050.00	515.00	73.68
	Mohwa	229	2499.00	2340.00	159.00	0.36
	Thingam	47	2499.00	2340.00	159.00	0.07
	B/Chuglam	21	3243.00	2580.00	663.00	0.14
						74.25
1992-93	Gurjan	20,520	4670.00	3500.00	1170.00	240.08
	Mohwa	286	2800.00	2600.00	200.00	0.57
	Thingam	93	4870.00	2950.00	1920.00	1.79
	B/Chuglam	106	4870.00	2950.00	1920.00	2.04
						244.48
1993-94	Gurjan	16264.795	4670.00	3850.00	820.00	133.37
	Badam	2605.461	3270.00	3250.00	20.00	0.52
	W/Chuglam	1158.631	3020.00	3250.00	(-)230.00	(+)2.66
	Poon	66.317	3020.00	2800.00	220.00	0.15
	Mohwa	332.281	3020.00	2800.00	220.00	0.73
	Thingam	94.199	5770.00	3250.00	2520.00	2.37
						134.48

(1)	(2)	(3)	(4)	(5)	(6)	(7)
1994-95	Gurjan	12361	7320.00	4240.00	3080.00	380.72
	Badam	1935	5100.00	3630.00	1470.00	28.44
	W/Chuglam	706	5900.00	3630.00	2270.00	16.03
	Poon	8	3380.00	3030.00	350.00	0.03
	Mohwa	430	3380.00	3030.00	350.00	1.50
	Thingam	17	9050.00	3630.00	5420.00	0.92
						427.64

Grand Total Rs.1111.31 lakhs

ANNEXURE X

Working Sheet showing Loss of Revenue due to Sales made at lower prices to two Private Local Industries viz.M/s.1 & 2. (Para 9.2.4.)

Species in demand by DGS&D	DGS&D Rate (average) (Rs./ cu.m.)	Rate at which sold to M/s ATI & JTP	Difference (Rs./cu.m.) (2) - (3)	Loss due to sales to M/s 1		Loss due to Sales to M/s 2	
				Qty sold (in cum)	Loss of revenue (Rs.in lakhs) (4)x(5)	Qty sold (in cum)	Loss of revenue (Rs.in lakhs) (4)x(7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1989-90							
Gurjan	3402.50	2190.00	1212.50	4901	59.42	3807	46.16
Badam	2362.50	2040.00	322.50	645	2.08	354	1.14
W/Chuglam	2241.50	2040.00	201.50	698	1.41	293	0.59
Poon	2362.50	1870.00	492.50	6	0.03	-	-
Mohwa	2362.50	1870.00	492.50	132	0.65	14	0.07
Thingam	2362.50	1870.00	492.50	59	0.29	1	-
					63.88		47.96
Total Loss of Revenue (Rs. in lakhd): 111.84 [(6) + (8)]							
1990-91							
Gurjam	3530.00	2730.00	800.00	7359	58.87	5294	42.35
Badam	2472.00	2346.00	126.00	1082	1.36	940	1.18
Poon	2472.00	2150.00	322.00	16	0.05	1	-
Mohwa	2472.00	2150.00	322.00	176	0.57	42	0.14
Thingam	2472.00	2150.00	322.00	11	0.04	12	0.04
					60.89		43.71

Total Loss of Revenue (Rs. in lakhs): 104.60 [(6) + (8)]

1991-92

Gurjan	3565.00	3050.00	515.00	7927	40.82	6211	31.98
Mohwa	2499.00	2340.00	159.00	115	0.18	86	0.13
Thingam	2499.00	2340.00	159.00	-	-	-	-
B/Chuglam	3243.00	2580.00	663.00	-	-	-	-
					-----		-----
					41.00		32.11
					-----		-----

Total Loss of Revenue (Rs. in lakhs): 73.11 [(6) + (8)]

1992-93

Gurjan	4670.00	3500.00	1170.00	9584	112.13	7513	87.90
Poon	2800.00	2600.00	200.00	5	0.01	7	0.01
Mohwa	2800.00	2600.00	200.00	95	0.19	86	0.17
Thingam	4870.00	2950.00	1920.00	-	-	-	-
					------		------
					112.33		88.08
					------		------

Total Loss of Revenue (Rs. in lakhs): 200.41

1993-94

Gurjan	4670.00	3850.00	820.00	5810.690	47.65	5369.700	44.03
Badam	3270.00	3250.00	20.00	1075.444	0.22	840.414	0.17
W/Chuglam	3020.00	3250.00	(-)230.00	442.782	(-)1.02	(+)395..407	(-)0.91
Poon	3020.00	2800.00	220.00	18.395	0.04	28.157	0.06
Mohwa	3020.00	2800.00	220.00	110.770	0.24	100.331	0.22
Thingam	5770.00	-	-	-	-	-	-
					------		-------
					47.13		43.57
					------		-------

Total Loss of Revenue (Rs. in lakhs): 90.70

1994-95

Gurjan	7320	4240	3080	4392	135.27	4040	124.43
Badam	5100	3630	1470	725	10.66	632	9.29
W/Chuglam	5900	3630	2270	241	5.47	203	4.61
Poon	3380	3030	350	-	-	8	0.02
Mohwa	3380	3630	(+) 250	152	(+) 0.38	124	(+) 0.31
Thingam	9050	3630	5420	-	-	-	-
					------		-----
					151.02		138.04
					------		-----

Total Loss of Revenue (Rs. in lakhs): 289.06

Grand total loss of Revenue (Rs. in lakhs): 869.74

LIST OF ABBREVIATIONS

ANIFPDC or The Company	Andaman & Nicobar Islands Forest and Plantation Development Corporation Limited
A&N	Andaman & Nicobar
GNP	Gross National Product
COPU	Committee on Public Undertakings
CARI	Central Agricultural Research Institute
cum	cubic metre
DGS&D	Director General of Supplies & Disposals
ffb	fresh fruit bunches
GOI	Government of India
ha	hectares
kg	kilogram
MT	Metric Tonnes

17