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JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
MINISTRY OF SURFACE TRANSPORT (MOST)
MUMBAI PORT TRUST (MBPT)

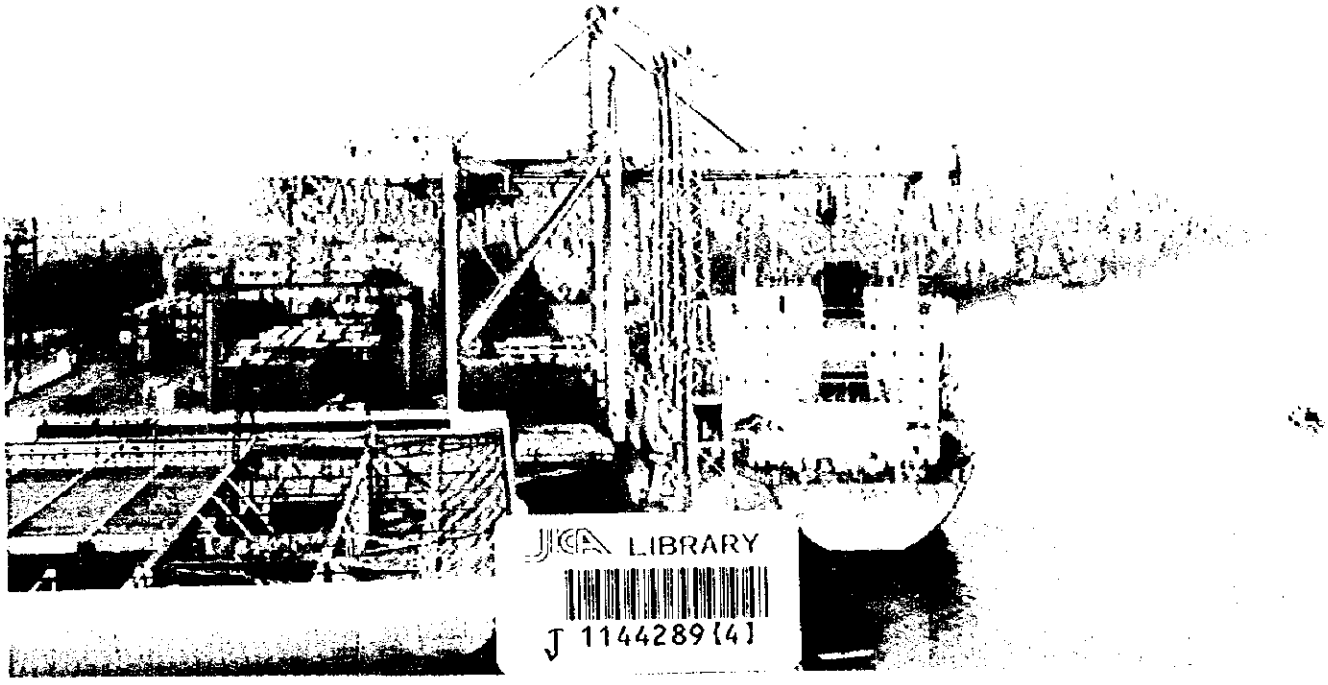
NO. 52

FINAL REPORT

THE STUDY ON DEVELOPMENT OF THE PORT OF MUMBAI IN INDIA

(VOLUME I)

PART 1 PRESENT CONDITIONS



MARCH 1998
THE OVERSEAS COASTAL AREA DEVELOPMENT INSTITUTE OF JAPAN (OCDI)
JAPAN PORT CONSULTANTS, LTD. (JPC)

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J R
98-041

The following foreign exchange rates are applied in this study:

US$ 1.00 = Indian Rs. 35.10 = ¥113.8 (as of May, 1997)

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PART 1 PRESENT CONDITIONS

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PREFACE

In response to a request from the Government of India , the Government of Japan decided to conduct a study on development of the Port of Mumbai in India and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent a study team to India three times between February 1997 and February 1998, 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 the Government of India and conducted field surveys at the port. After the team returned to Japan, further studies were made and the present report was prepared.

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

I wish to express my sincere appreciation to the officials concerned of the Government of India for their close cooperation they extended of the team.

March, 1998

Kimio Fujita
President
Japan International Cooperation Agency

LETTER OF TRANSMITTAL

March, 1998

Mr. Kimio Fujita
President
Japan International Cooperation Agency

Dear Mr. Fujita:

It is my great pleasure to submit herewith the Report for the Study on Development of the Port of Mumbai in India.

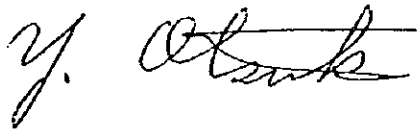
The study team which consists of the Overseas Coastal Area Development Institute of Japan (OCDI) and Japan Port Consultants, Ltd. (JPC), headed by myself, conducted a survey in India from February 1997 to February 1998 as per the contract with the Japan International Cooperation Agency.

The findings of this survey were fully discussed with the officials of the Mumbai Port Trust and other authorities concerned to formulate the Master Plan for the period up to the year 2017 and to formulate and examine the feasibility of the Short-term Plan for the period up to the year 2007, and were then compiled into this report.

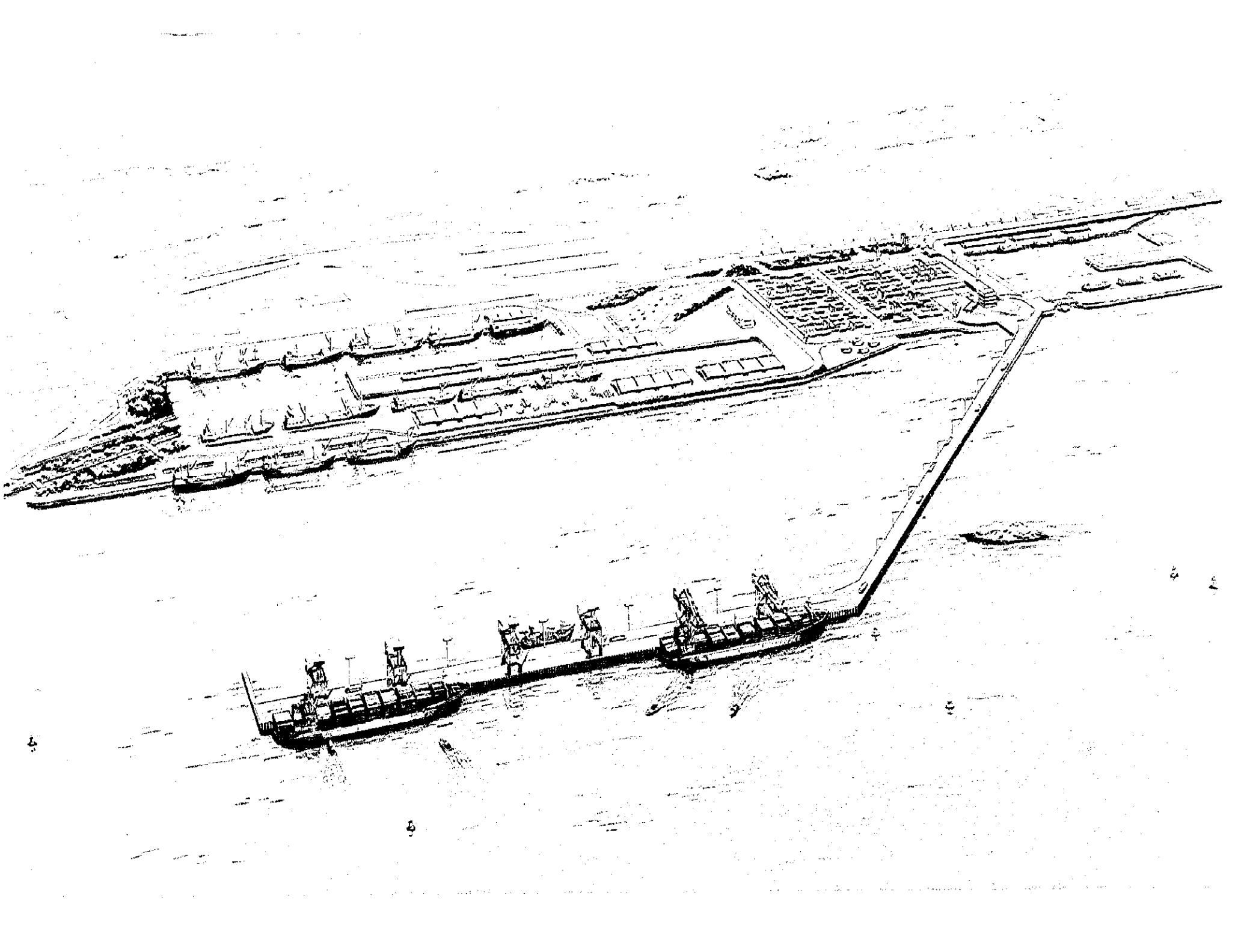
On behalf of the study team, I would like to express my deepest appreciation to the Government of India, Mumbai Port Trust and other authorities concerned for their brilliant cooperation and assistance and for the heartfelt hospitality which they extended to the study team during our stay in India.

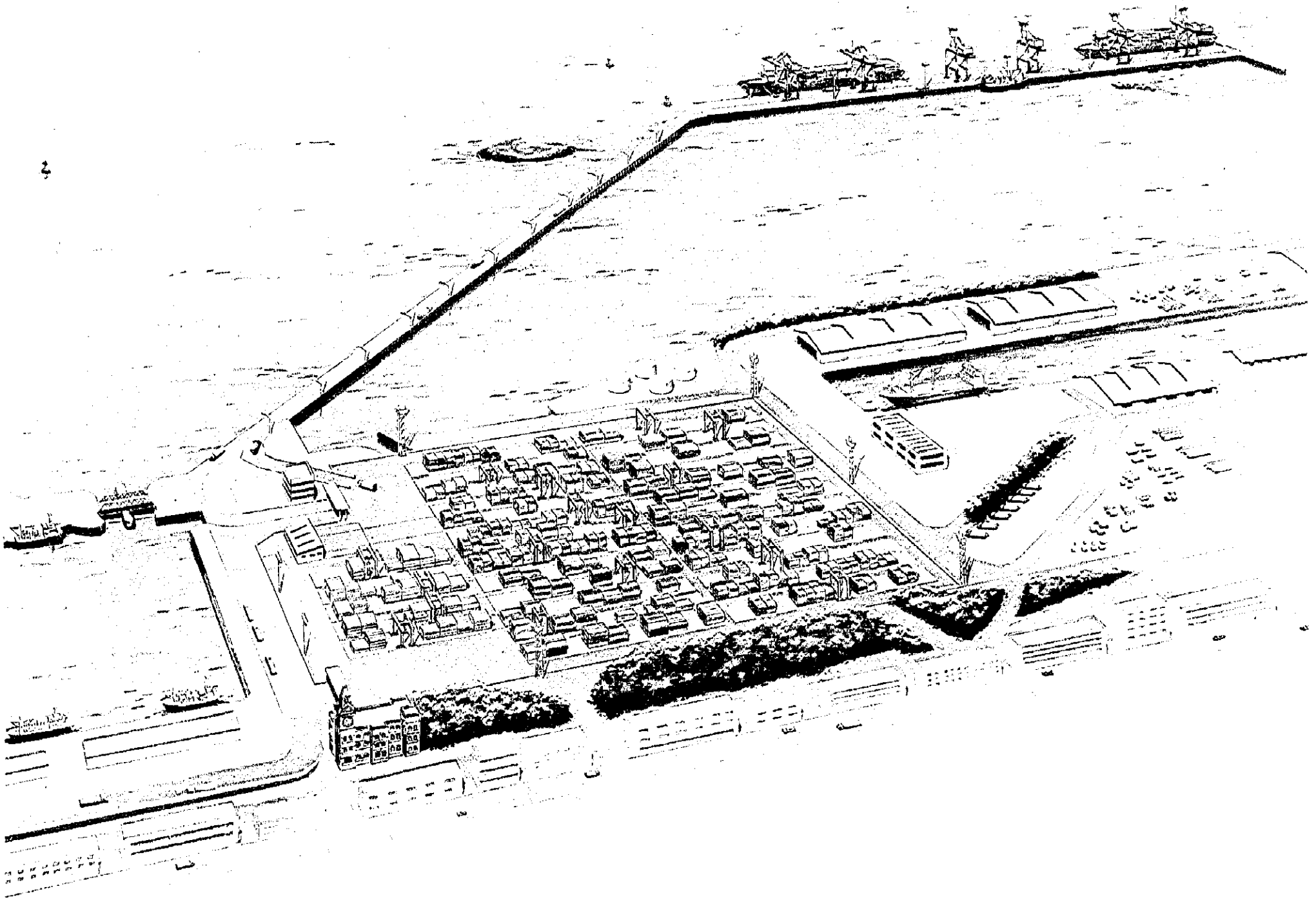
I am also greatly indebted to the Japan International Cooperation agency, the Ministry of Foreign Affairs, the Ministry of Transport and the Embassy of Japan in India for giving us valuable suggestions and assistance during the preparation of this report.

Respectfully,



Yugo Otsuki
Leader of the Study Team for the Study
on Development of the Port of Mumbai in
India





ABBREVIATIONS

ACR	Annual Confidential Report
A/N	Arrival Notice
1A	20 Foot Container
BARC	Bhapha Atmic Research Centre
B/C	Benefit/Cost
BI	Butcher Island
BIS	Bureau of Indian Standard
B/L	Bill of Lading
BOD	Biochemical Oxygen Demand
BOQ	Bill of Quantity
BOT	Build-Operate-Transfer
B&P	Bertlin and Partners
BPCL	Bharat Petroleum Corporation Limited
BPS	Ballard Pier Station, Ballard Pier South
BPX	Ballard Pier Extension
CARMINS	Cargo Management and Information System
CD	Chart Datum
CDW	Cotton Depot West
CFS	Container Freight Station
CIF	Cost, Insurance and Freight
CLP	Container Load Plan
COD	Cotton Depot, Chemical Oxygen Demand
CONCOR	Container Corporation of India
CPA	Closest Position of Approach
CPCB	Central Pollution Control Board
CRS	Central Railway Stores
CRZ	Coastal Regulation Zone
CTCS	Container Traffic and Control System
CUM	Cubic Metre

CWC	Central Warehousing Corporation
CWPC	Central Water and Power Commission
CWPRS	Central Water & Power Research Station
1C	40 Foot Container
dB	Decibel
DCI	Dredging Corporation of India
DD	Designed Depth
DF	Dual Frequency
DGPS	Differential Global Positioning System
Dk	Dock
DO	Dissolved Oxygen
D/O	Delivery Order
DRCM	Direct Reading Current Meter
DWT	Dead Weight Tonnage
E	East
EIA	Environmental Impact Assessment
EIR	Equipment Interchange Receipt
EIRR	Economic Internal Rate of Return
EIS	Executive Information System, Environmental Impact Statement
EL	Entrance Lock
EMPA	Europe Maritime Pilot Association
E/P	Export Permission
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure
ETP	Efficient Treatment Plant
FA & CAO	Financial Adviser & Chief Accounting Officer
FB	Frere Basin
FCL	Full Container Load
FMS	Financial Management System
FOB	Free on Board
FW	New Ferry Wharf

G	Green
GAP	Ganga Action Plan
GDP	Growth Domestic Products
GLD	General Landing Date
Gp.Fl.	Group Flashing
GPS	Global Positioning System
GRT	Gross Registered Tonnage
HC	Harbor Channel
HJ	Haji Bunder
HP	Horse Power
HPCL	Hindustan Petroleum Corporation Limited
HTL	High Tide Line
HY	Hay Bunder
Hz	Hertz
IALA	The International Association of Lighthouse Authority
ICD	Inland Container Depot
ID	Indira Dock
IDB	Indira Dock Berth
IDH	Indira Dock Harbor Wall
ID-HW	Indira Dock Harbor Wall
IEE	Initial Environmental Examination
IGM	Import General Manifest
ILAC	Ilac Limited
IMD	Indian Meteorological Department
IMO	International Maritime Organization
IS	Indian Standard
ISO	International Standardization Organization
JD	Jawahar Dweep
J/E	Jetty End
JICA	Japan International Cooperation Agency
JNP	Jawaharlal Nehru Port

JNPT	Jawaharlal Nehru Port Trust
JVC	Joint Venture Companies
KPT	Kandla Port Trust
kt	Knot
L	Length
LCL	Less than Container Load
LOA	Length Overall
LPG	Liquid Petroleum Gas
LTL	Low Tide Line
M	Mile, Million
m	metre
MBP	Mumbai Port
MBPT	Mumbai Port Trust
MCGB	Municipal Corporation of Greater Bombay
MD	Maintained Depth, Manganese Depot
MHWN	Mean High Water Neap
MHWS	Mean High Water Spring
MLD	Million Litre per Day
MLWN	Mean Low Water Neap
MLWS	Mean Low Water Spring
MMRDA	Mumbai Metropolitan Region Development Authority
MOD	Manganese Ore Depot
MOEF	Ministry of Environment and Forest
MOST	Ministry of Surface Transport
MOT	Marine Oil Terminal
M/P	Master Plan
MPCB	Maharashtra Pollution Control Board
MPN	Most Probable Number
MSR	Mazagaon Sewri Reclamation
M/R	Mate's Receipt
MT	Motor Tanker, Metric Ton

MV	Motor Vessel
MWL	Maintained Water Level
N	North
ND	Not Detected
NE	Northeast
NGO	Non Governmental Organization
NIO	National Institute of Oceanography
NM	Nautical Mile
NNE	North Northeast
NOI	Net Operating Income
N.O.S.	Not Otherwise Specified
NRT	Net Registered Tonnage
NW	Northwest
NWDB	National Wastland Development Board
Occ	Occulting
OIL	Oil India Limited
ONGC	Oil and National Gas Corporation Limited, Oil & Natural Gas Commission
ORZ	Ocean Regulation Zone
PC Slab	Prestressed Concrete Slab
PD	Prince's Dock
pH	Potential Hydrogen
POL	Petroleum,Oil and Lubricant
PP	Pir Pau Oil Terminal
PPT	Parts per Trillion
PS	Horse Power
Q	Quick
QGC	Quay side Gantry Crane
R	Red
RCD	Railway Container Depot
RCF	Rashtriya Chemical & Fetilizers

RS	Reach Stacker
Rs.	Rupee
RTG	Rubber Tired Gantry Crane
S	South
S/A	Shipping Application
SE	Southeast
S/O	Shipping Order
SPCB	State Pollution Control Board
SPM	Suspended Particulate Matter
SSW	South Southwest
SW	Southwest
T&L	Tug & Launch
TC	Turning Circle
TEU	Twenty Foot Equivalent Unit
TP	Timber Pond Depot
TPM	Total Particulate Matter
TPS	Timber Pond South
TV	Television
UKC	Under Keel Clearance
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Program
VD	Victoria Dock
VHF	Very High Frequency
VTMS	Vessel Traffic Management System
VTS	Vessel Traffic Service
W	West, White
WA	Wadala Area Depot
WHO	World Health Organization
YAP	Yamuna Action Plan

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Chapter II Natural Conditions in and around MBP

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Chapter I

Chapter II

ORGANIZATION OF THE STUDY TEAM

ORGANIZATION OF THE STUDY TEAM

The study team is comprised of 11 specialists. This names and responsibilities are listed below;

Name	Responsibilities
Yugo Otsuki	Team Leader, Overall Management (OCDI)
Masahiko Furuichi	Port Planning, Environmental Impact Assessment (OCDI)
Nobuaki Kojima	Navigation Safety (OCDI)
Tadahiko Kawada	Demand Forecast, Economic Analysis (OCDI)
Shinichi Tezuka	Cargo Handling System (OCDI)
Shinobu Yamamoto	Port Management and Operation, Financial Analysis (OCDI)
Kenichi Sasaki	Design, Cost Estimation (JPC)
Tadasu Okude	Machinery, Equipment (JPC)
Anil Kumar Bhakta	Natural Survey, Dredging (JPC)
Sukriti Mandal	Environmental Survey (1) (JPC)
Tarun Kumar Acharya	Environmental Survey (2) (JPC)
Harutoshi Usui	Coordinator (OCDI)
Hideki Kobayashi	Coordinator (OCDI)
Toshihiro Okura	Coordinator (OCDI)

Part I PRESENT CONDITIONS

Chapter I Socio-Economic Condition of Mumbai Metropolis, Maharashtra State and India

1.1 Population

1.1.1 Population of India

India has the second-largest population in the world, exceeded only by that of China. It had 439 million people in 1961, 548 million in 1971, 683 million in 1981, and 846 million in 1991. Estimates for 1996 put the figure at 932 million. Historically, decennial growth of Indian population increased from 1931- 1971 and declined from 1971-1991. In the last ten year period of (1987-1996), annual growth rate continuously decreased from 2.15 % to 1.75%(see Table 1.1.1, and Table 1.1.2).

Statistically, the population of India is divided into age brackets at intervals of five and ten years. The first three brackets, 0-4 years, 5-14 years, 15-19 years, account for 47.1 % of the total population (see Table 1.1.3).

There are 25 states and 7 union territories in India. Among these states and union territories, Utter Pradesh has a population of around 139 million in population accounting for 16.3% of the total population, followed by Bihar (86 million),Maharashtra (79 million), West Bengal (68 million) and Andhra Pradesh (67 million) in 1991.These five states account for more than 51 % of total population (see Table 1.1.4).

Calcutta is the most populous city , followed by Mumbai (Greater) , Delhi, Madras, Hyderabad, Bangalore, Ahmedabad, Pune, Kanpure and Surat. Nearly 30% of India's people live in urban areas and the country has more than 20 cities with populations of over one million (see Table 1.1.5).

1.1.2 Population of Maharashtra State

Maharashtra is the third largest State in India both in terms of population and area. Its booming capital, Mumbai, makes it one of the most important states economically in India. The population of Maharashtra according to the 1991 Census was 78.9 million. The population growth rate in the State during the 1981-91 decade was 25.6% which was higher than that of all India (23.9%) (see Table 1.1.1). The urban population in Maharashtra (30.5 million) was

38.7% of the total population. This percentage was much higher than that of the entire country (25.8%). In the period of 1981-91 , the urban population in Maharashtra increased by 38.6% as compared to 37.1% growth of the entire country (see Table 1.1.6).

1.1.3 Population of Mumbai Metropolis

Mumbai is the capital of Maharashtra State and the economic powerhouse of India. The fastest moving , most affluent and most industrialised city in India, it also has the country's busiest international seaport and airport, handling nearly 50% of the total foreign trade. The population in the Mumbai Metropolitan Region as per the 1991 Census was 9.9 million. According to the census, the population of 1.7 million were added to the population of 8.2 million enumerated in 1981. In the three decades from 1951-1981, Mumbai grew at the compound rate of 3.9% per annum, faster than both Maharashtra and India. In the 1980's, at 1.9% per annum, Mumbai grew much slower than both (see Table 1.1.1).

Table 1.1.1 Growth of Population by Census

	Item	unit	1931	1941	1951	1961	1971	1981	1991
India	Population	million	279.0	318.7	361.1	439.2	548.2	683.3	846.3
	Decennial growth	%	11.0	14.2	13.3	21.6	24.8	24.7	23.8
	average annual growth rat	%	1.0	1.3	1.3	2.0	2.2	2.2	2.2
Maharashtra State									
	Population	million	NA	NA	32.0	39.6	50.4	62.8	78.9
	Decennial growth	%	NA	NA	19.3	23.6	27.5	24.5	25.7
	average annual growth rat	%	NA	NA	1.8	2.2	2.4	2.2	2.3
Mumbai Metropolitan									
	Population	million	NA	NA	3.0	4.2	6.0	8.2	9.9
	Decennial growth	%	NA	NA	64.4	38.7	43.8	38.1	20.4
	average annual growth rat	%	NA	NA	5.1	3.3	3.7	3.3	1.9

(Source: Statistical Outline of India 1996-97, Registrar General and Census Commissioner, Administrative Reports of Municipal Corporation of Greater Mumbai)

Note : Estimates are as on 1st March of the year as per Census of India

Table 1.1.2 Growth of Populations

	Unit	1986	1987	1988	1989	1990	1991
Population (Annual estimate)	million	767.2	783.7	800.5	817.5	834.7	851.7
Annual growth rate	%	2.17	2.15	2.14	2.12	2.11	2.03

	Unit	1992	1993	1994	1995	1996
Population (Annual estimate)	million	867.8	883.9	899.9	916.0	932.1
Annual growth rate	%	1.90	1.86	1.82	1.80	1.75

(Source : Statistical Outline of India 1994-95, 1996-97)

Note: Mid-year estimates and are provisional. Annual growth rate are calculated on the basis of these estimates.

Table 1.1.3 Age Distribution of Population in 1991

Age Group	Population(Million)			Percentage Distribution		
(Years)	Male	Female	**Total**	Male	Female	**Total**
0-4	57.5	52.9	110.4	13.1%	13.0%	13.1%
5-14	102.8	93.2	196.0	23.4%	22.9%	23.2%
15-19	49.2	42.3	91.5	11.2%	10.4%	10.8%
20-24	41.3	39.5	81.2	9.4%	9.7%	9.6%
25-34	66.3	62.3	128.6	15.1%	15.3%	15.2%
35-44	48.8	45.6	93.9	11.1%	11.2%	11.1%
45-54	35.1	33.0	68.6	8.0%	8.1%	8.1%
55-59	13.6	12.6	26.2	3.1%	3.1%	3.1%
60& above	25.0	25.6	50.8	5.7%	6.3%	6.0%
Total	439.2	407.1	846.3	100.0%	100.0%	100.0%

(Source: Statistical Outline Of India 1996-97)

Table 1.1.4 State-wise Population

	Area	Population (in thousands)		
	('000km2)	1971	1981	1991
States:				
Andhra Pradesh	275	43,503	53,551	66,508
Arunachal Pradesh	84	468	632	865
Assam	78	14,625	18,041	22,414
Bihar	174	56,353	69,915	86,374
Goa	4	795	1,008	1,170
Gujarat	196	26,697	34,086	41,310
Haryana	44	10,036	12,922	16,464
Himachal Pradesh	56	3,460	4,281	5,171
Jammu&Kashmir	222	4,617	5,987	7,719
Karnataka	192	29,299	37,136	44,977
Kerala	39	21,347	25,454	29,099
Madhya Pradesh	443	41,654	52,179	66,181
Maharashtra	308	50,412	62,783	78,937
Manipur	22	1,073	1,421	1,837
Meghalaya	22	1,012	1,336	1,775
Mizoram	21	332	494	690
Nagaland	17	516	775	1,210
Orissa	156	21,945	26,370	31,660
Punjab	50	13,551	16,789	20,282
Rajasthan	342	25,766	34,262	44,006
Sikkim	7	210	316	406
Tamil Nadu	130	41,199	48,408	55,859
Tripura	10	1,556	2,053	2,757
Utter Pradesh	294	88,341	110,863	139,112
West Bengal	89	44,312	54,581	68,078
Union territories :				
Andaman & Nikobar islands	8	115	189	281
Chandigarh	0	257	452	642
Dadra & Nagar Haveli	1	74	104	138
Daman & Dui	0	63	79	102
Delhi	2	4,066	6,220	9,421
Lakshadweep	0	32	40	52
Pondicherry	1	472	604	808
All-India	3,287	548,160	683,329	846,303

(Source : Statistical Outline Of India 1996-97)

Table 1.1.5 Population of Largest 10 Cities in 1991

	Population	Decennial Growth		Literacy Rate
	1991	1981-91	1971-91	1991
	('000s)	%		%
Calcutta	11,022	19.9	23.9	77.1
Mumbai(Greater)MC	9,926	20.4	38.1	82.5
Delhi	8,419	47.0	57.1	76.2
Madras	5,422	26.4	35.3	81.5
Hyderabad	4,344	70.6	42.7	70.7
Bangalore	4,130	41.3	75.6	79.4
Ahmedabad	3,312	30.0	45.9	79.6
Pune	2,494	47.9	48.6	81.0
Kanpur	2,030	23.9	23.5	72.2
Surat	1,519	66.2	87.4	76.0

(Source : Statistical Outline Of India 1996-97)

Table 1.1.6 Rural and Urban Population

		1981		1991		1981-91
		No.	Share	No.	Share	Growth Rate
		million	%	million	%	%
India	Rural	525.0	76.7	629.0	74.3	20.0
	Urban	159.0	23.3	218.0	25.8	37.1
	Total	683.0	100.0	846.0	100.0	23.9
Maharashtra State	Rural	40.8	65.0	48.4	61.3	18.6
	Urban	22.0	35.0	30.5	38.7	38.6
	Total	62.8	100.0	78.9	100.0	25.6
Mumbai Metropolitan	Rural	1.4	12.9	1.1	7.4	-24.5
	Urban	9.7	87.1	13.5	92.6	39.4
	Total	11.1	100.0	14.5	100.0	31.1

Source: Registrar General and Census Commissioner, Government of India
Director of Census Operation, Maharashtra

1.2 Gross Domestic Product (GDP)

1.2.1 GDP

The Indian GDP amounted to around 2.742 billion Rupees (Rs) in the fiscal year of 1995-96 at constant price of the year 1980-81, showing upward trend from 3.7% in 1970-71 to 5.4% in 1990-91, continuous increases from 5.3 % in 1992-93 to 7.1% in 1995-96 except for a decline of 0.8% in 1991-92. The initial spurt reform 1991-92 to 1994-95 was very successful by all accounts, resulting in a jump to 7.2% in economic growth in 1994-95. Since 1994-95, however there was a marked slow down in the pace of reform. Nevertheless, GDP grew by 7.1% in 1995-96.(see Table 1.2.1).

The income of Maharashtra State in 1995-96 is estimated to be 388,430 million Rupees (Rs) at constant (1980-81) price showing an increase of 8.5% over the preceding fiscal year. At current prices, the state income in 1995-96 is estimated to be 1,315,780 million Rs showing an increase of 19.6% over the preceding fiscal year (see Table 1.2.3 and Table 1.2.4). The state income in 1995-96 at constant price was two and half times as much as that in 1980-81.

1.2.2 GDP by Sector

The agriculture sector in 1995-96 accounts for 28.8% of the total GDP, followed by the manufacturing sector (29.2%) , transport sector (20.0%) and banking sector (11.3%) . The share of the agriculture sector decreased gradually its share from 34.5% to 28.8% in the period of 1986-1995. On the other hand , the sector of manufacturing , transport and banking gradually increased their shares from 26.6% to 29.2%, from 18.0% to 20.0%, and from 9.7% to 11.3% in the same period . The annual growth rate of the agriculture sector in the fiscal year of 1995-96 is only 0.3%, a sharp decline from the previous years growth of 4.8%. This considerable decline, however, was compensated by an increase in the manufacturing, transport and public administration sector (see Table 1.2.6).

In Maharashtra State, the tertiary sector in 1995-96 accounts for 46.4% of the total Net State Domestic Product, followed by the secondary sector (35.2%) and primary sector(18.4%) at 1980-81 price (see Table 1.2.3).

1.2.3 GDP per Capita

Tables 1.2.7 and Table 1.2.8 show GDP per capita in India expressed at constant price and current price, respectively. According to the former table, GDP per capita in the past 9 years, maintained an upward trend with exception of 1991-92. Decline in the per capita in 1991-92 was due to a slump in production of agriculture sector and manufacturing sector. Per capita income in Maharashtra state is shown in Table 1.2.3. After a decline of 3% in 1991-92, a substantial recovery was observed in the following two years with respective growth rates of 11.0% and 8.6%.

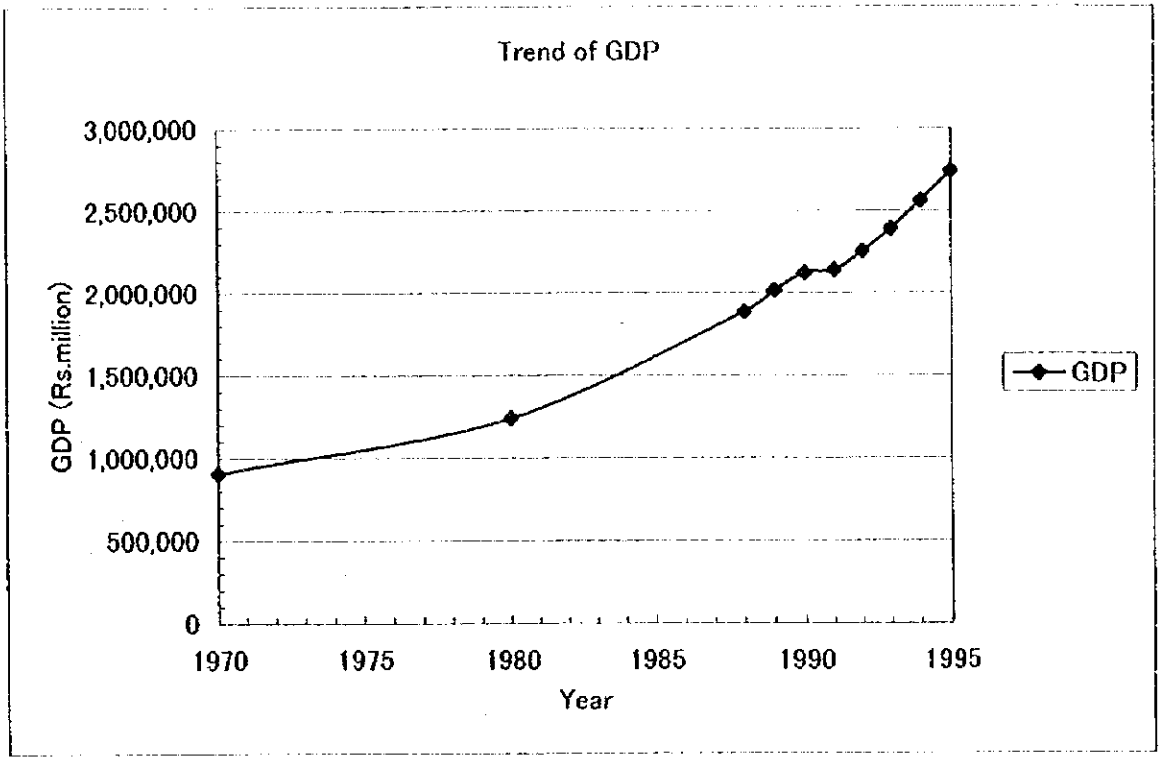

Figure 1.2.1 Trend of Indian GDP

Table 1.2.1 Trend of Indian GDP at Factor Cost (At 1980-81 prices)

(Unit: Rs.million)

Item / Year	1970-71	1980-81	1986-87	1987-88	1988-89	1989-90	1990-91
GDP	904,260	1,224,270	1,632,710	1,703,220	1,884,610	2,014,530	2,122,530
Growth rate	#3.7	#3.1	4	4	11	7	5

Item / Year	1991-92	1992-93	1993-94	1994-95	1995-96$
GDP	2,139,830	2,252,680	2,388,640	2,560,950	2,742,090
Growth rate	1	5	6	7	7

(Source: Economic Survey 1996-97)

Note #: average annual growth rate, $: quick estimates

Table 1.2.2 Trend of Indian GDP at Factor Cost (At Current prices)

(Unit: Rs.million)

Item / Year	1970-71	1980-81	1988-89	1989-90	1990-91	1991-92	1992-93
GDP	397,080	1,224,270	3,527,060	4,086,620	4,778,140	5,527,680	6,307,720
Growth rate	#10.0	#11.9	*11.2	16	17	16	14

Item / Year	1993-94	1994-95	1995-96
GDP	7,318,910	8,583,400	9,857,870
Growth rate	16	17	15

(Source: Economic Survey 1996-97)

Note #, * average annual growth rate

Table 1.2.3 Net State Domestic Products & Per Capita Income of Maharashtra (at 1980-81 price)

	Unit	1980-81	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Primary	Rs.million	42,610	61,810	47,610	63,490	67,770	65,480	71,610
Growth rate	%		-5.9%	-23.0%	33.4%	6.7%	-3.4%	9.4%
Secondary	Rs.million	53,210	195,090	94,690	102,040	112,870	125,700	136,650
Growth rate	%		13.6%	-51.5%	7.8%	10.6%	11.4%	8.7%
Tertiary	Rs.million	55,810	115,440	126,390	138,660	156,280	166,700	180,170
Growth rate	%		8.7%	9.5%	9.7%	12.7%	6.7%	8.1%
N.S.D.P	Rs.million	151,630	272,450	268,690	304,190	336,920	357,880	388,430
Growth Rate	%		4.6%	-1.4%	13.2%	10.8%	6.2%	8.5%
Per Capita Income	Rs	2,435	3,486	3,365	3,736	4,057	4,227	4,500
Growth Rate	%		2.1%	-3.5%	11.0%	8.6%	4.2%	6.5%

(Source: Directorate of Economics and Statistics, Government of Maharashtra)

Table 1.2.4 Net State Domestic Products & Per Capita Income of Maharashtra (at Current price)

	Unit	1980-81	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Primary	Rs.million	42,610	136,620	130,610	175,180	210,150	235,620	277,990
Growth rate	%		4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
Secondary	Rs.million	53,210	19,509	216,650	25,919	310,200	355,690	452,800
Growth rate	%		18.5%	1010.5%	-88.0%	1096.8%	14.7%	27.3%
Tertiary	Rs.million	55,810	250,040	305,040	364,100	448,070	509,180	584,990
Growth rate	%		21.5%	22.0%	19.4%	23.1%	13.6%	14.9%
N.S.D.P	Rs.million	151,630	581,750	652,300	798,470	968,420	1,100,490	1,315,780
Growth Rate	%		16.0%	12.1%	22.4%	21.3%	13.6%	19.6%
Per Capita Income	Rs	2,435	7,444	8,170	9,806	11,662	12,997	15,244
Growth Rate	%		13.3%	9.8%	20.0%	18.9%	11.4%	17.3%

(Source: Directorate of Economics and Statistics, Government of Maharashtra)

Table 1.2.5 GDP by Industrial Sector (at 1980-81 price)

(unit: Rs.million)

	Category	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92
1	Agriculture, forestry, and logging, fishing, mining and quarrying	562,590	565,590	657,560	670,640	698,600	684,800
2	Manufacturing, construction, electricity, gas and water supply	434,040	462,870	503,240	555,970	594,930	585,050
3	Transport, communication and trade	293,350	310,280	331,890	358,940	377,440	386,120
4	Banking and insurance, real estate and ownership of dwellings and business service	159,160	168,710	184,160	204,030	217,000	239,720
5	Public administration and defense and other services	183,570	195,770	207,760	224,950	234,560	244,140
	Total	1,632,710	1,703,220	1,884,610	2,014,530	2,122,530	2,139,830

	Category	1992-93	1993-94	1994-95	1995-96
1	Agriculture, forestry, and logging, fishing, mining and quarrying	724,210	749,650	785,900	788,380
2	Manufacturing, construction, electricity, gas and water supply	610,910	654,420	716,670	801,800
3	Transport, communication and trade	410,480	441,140	485,210	549,720
4	Banking and insurance, real estate and ownership of dwellings and business service	250,840	277,110	296,810	308,660
5	Public administration and defense and other services	256,240	266,320	276,360	293,530
	Total	2,252,680	2,388,640	2,560,950	## 2,742,090

(Source: Central Statistics Organization)

Remark: ## Quick estimate

Table 1.2.6 GDP by Industrial Sector (at 1980-81price)

(Percentage Distribution)

	Category	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92
1	Agriculture, forestry, and logging, fishing,	-1.0%	0.5%	16.3%	2.0%	4.2%	-2.0%
	mining and quarrying	34.5%	33.2%	34.9%	33.3%	32.9%	32.0%
2	Manufacturing, construction, electricity,	6.9%	6.6%	8.7%	10.5%	7.0%	-1.7%
	gas and water supply	26.6%	27.2%	26.7%	27.6%	28.0%	27.3%
3	Transport, communication	6.3%	5.8%	7.0%	8.2%	5.2%	2.3%
	and trade	18.0%	18.2%	17.6%	17.8%	17.8%	18.0%
4	Banking and insurance, real estate and	8.2%	6.0%	9.2%	10.8%	6.4%	10.5%
	ownership of dwellings and business service	9.7%	9.9%	9.8%	10.1%	10.2%	11.2%
5	Public administration and defense and other	9.2%	6.6%	6.1%	8.3%	4.3%	4.1%
	services	11.2%	11.5%	11.0%	11.2%	11.1%	11.4%
		4.3%	4.3%	10.6%	6.9%	5.4%	0.8%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

	Category	1992-93	1993-94	1994-95	1995-96
1	Agriculture, forestry, and logging, fishing,	5.8%	3.5%	4.8%	0.3%
	mining and quarrying	32.1%	31.4%	30.7%	28.8%
2	Manufacturing, construction, electricity,	4.4%	7.1%	9.5%	11.9%
	gas and water supply	27.1%	27.4%	28.0%	29.2%
3	Transport, communication	6.3%	7.5%	10.0%	13.3%
	and trade	18.2%	18.5%	18.9%	20.0%
4	Banking and insurance, real estate and	4.6%	10.5%	7.1%	4.0%
	ownership of dwellings and business service	11.1%	11.6%	11.6%	11.3%
5	Public administration and defense and other	5.0%	3.9%	3.8%	6.2%
	services	11.4%	11.1%	10.8%	10.7%
		5.3%	6.0%	7.2%	7.1%
	Total	100.0%	100.0%	100.0%	100.0%

(Source: Central Statistics Organization)

Remark: Annual growth rate (%)

Share per total (%)

Table 1.2.7 Trend of GDP Per Capita at 1980-81 Prices

(Unit: Rs)

Item	1986-87	1987-88	1988-87	1989-90	1990-91	1991-92
Per Capita	2,373	2,434	2,619	2,732	2,839	2,800
Growth Rate (%)	2.6	2.6	7.6	4.3	3.9	-1.4

Item	1992-93	1993-94	1994-95
Per Capita	2,896	2,957	3,090
Growth Rate (%)	3.4	2.1	4.5

(Source: Central Statistical Organization)

Table 1.2.8 Trend of GDP Per Capita at Current Prices

(Unit: Rs)

Item	1986-87	1987-88	1988-87	1989-90	1990-91	1991-92
Per Capita	3,753	4,179	4,859	5,490	6,328	7,158
Growth Rate (%)	9.4	11.4	16.3	13.0	15.3	13.1

Item	1992-93	1993-94	1994-95
Per Capita	8,042	8,975	10,416
Growth Rate (%)	12.3	11.6	16.1

(Source: Central Statistical Organization)

1.3 Foreign Trades

1.3.1 Trade of Export / Import Value

The foreign trade value of export in 1995-96 was about 1,063 billion Rupee (Rs) while that of imports was about 1,227 billion Rs. As to the trade structure of India, foreign exchange earnings mainly from the export of manufactured goods are used to import mainly capital goods; in 1995-96, manufactured goods accounted for around 75% of total exports, but registered nil in imports (see Table 1.3.1 and Table 1.3.2).

As to commodity-wise share in trade value , in export, textile fabrics & manufactured take the largest share accounting for 23% of the total export in 1995-96, followed by handicrafts, gems and jewelry, machinery including transport and metal manufactures. On the other hand, in import, the major commodities are petroleum including lubricant, non-electrical machinery apparatus and appliances including machine tools and chemical element and compounds (see Table 1.3.3 and Table 1.3.4).

1.3.2 Trend of Export / Import Value by Main Countries

Table 1.3.2 shows the major trade partners of India. Asia, USA, Japan, Germany, Saudi Arabia and Africa have historically been the major trade partners in both export and import (see Table 1.3.5).

Table 1.3.1 Trend of Export / Import Value

Items	Year	1970-71	1975-76	1980-81	1985-86	1988-89	1989-90
Value	Export	15,350	40,360	67,110	108,950	202,320	276,580
(Rs.million)	Import	16,340	52,650	125,490	196,580	282,350	353,280

Items	Year	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96(p)
Value	Export	325,530	440,410	536,880	697,510	826,740	1,063,530
(Rs.million)	Import	431,980	478,510	633,750	731,010	899,710	1,226,780

(Source: Directorate General of Commercial Intelligence and Statistics
(p) Provisional

Table 1.3.2 Trend of Export / Import Value by Commodity Groups

(Unit: Rs.million)

Items	Year	1970-71	1980-81	1985-86	1990-91
Export	Agricultural and allied products	4,870	20,570	30,180	63,170
	Ores and mineral (excl.coal)	1,640	4,140	7,850	14,970
	Manufactured goods	7,720	37,470	63,740	237,360
	Mineral fuels and lubricants	130	280	6,550	9,480
	Others	1,000	4,660	630	550
Import	Food and live animals chiefly for food	2,420	3,800	8,540	NA
	Raw materials and intermediate manufactures	8,890	97,600	139,660	NA
	Capital goods	404	19,100	42,850	10,466
	Others	990	4,990	530	NA

Items	Year	1992-93	1993-94	1994-95	1995-96
Export	Agricultural and allied products	94,570	130,210	137,120	21,138
	Ores and mineral (excl.coal)	18,140	23,710	25,380	3,061
	Manufactured goods	404,350	527,020	646,880	80,219
	Mineral fuels and lubricants	15,200	15,540	16,100	1,761
	Others	620	1,030	1,260	174
Import	Food and live animals chiefly for food	NA	NA	NA	NA
	Raw materials and intermediate manufactures	NA	NA	NA	NA
	Capital goods	108,390	166,630	199,900	282,890
	Others	NA	NA	NA	NA

Source: Directorate General of Commercial Intelligence and Statistics

Note NA: Not available

T able 1.3.3 Trend of Export Value by Main Commodity

(Unit: Rs.million)

Item	Year	1970-71	1980-81	1985-86	1990-91	1992-93	1993-94	1994-95	1995-96
1.Agricultural and allied products		4,870	20,570	30,180	63,170	94,570	130,210	137,120	211,380
1.1	Coffee	250	2,140	2,650	2,520	3,760	5,460	10,530	15,030
1.2	Tea and mate	1,480	4,260	6,260	10,700	9,770	10,590	9,750	11,710
1.3	Oil cakes	550	1,250	1,340	6,090	15,450	23,240	17,980	23,490
1.4	Tabasco	330	1,410	1,700	2,630	4,740	4,610	2,550	4,470
1.5	Cashew kernels	570	1,400	2,250	4,470	7,490	10,480	12,470	12,370
1.6	Spices	390	110	2,780	2,390	3,930	5,680	6,120	7,940
1.7	Sugar and molasses	290	400	160	380	3,540	1,780	620	5,060
1.8	Raw cotton	140	1,650	680	8,460	1,820	6,540	1,400	2,040
1.9	Rice	50	2,240	1,960	4,620	9,760	12,870	12,060	45,680
1.10	Fish and fish preparation	310	2,170	4,090	9,600	17,430	25,520	35,370	33,810
1.1	Meat and meat preparation	30	560	740	1,400	2,570	2,450	4,030	6,270
1.1	Fruits, vegetables and pulses	120	800	1,240	2,160	3,660	4,880	6,060	8,020
1.1	Miscellaneous processed foods	40	360	820	2,130	3,730	4,700	2,820	7,450
2.Ores and minerals		1,640	4,140	7,850	14,970	18,140	23,710	25,380	30,610
2.1	Mica	160	180	210	350	240	280	220	270
2.2	Iron ore	1,170	3,030	5,790	10,490	11,040	13,740	12,970	17,210
3.Manufactured goods		7,720	37,470	63,740	237,360	404,350	527,020	646,880	802,190
3.1	Textile fabrics & manufactured	1,450	9,330	17,950	68,320	124,980	148,630	199,450	241,490
3.1-1	Cotton yarn, fabrics made-ups etc.	1,420	4,080	5,740	21,000	39,110	48,210	70,140	86,690
3.1-2	Ready-made garments of all textile materials	290	5,500	10,670	40,120	69,310	81,120	103,050	122,950
3.2	Coir yarn and manufactures	130	170	340	480	900	1,300	1,730	2,100
3.3	Jute manufactures incl. twist and yarn	1,900	3,300	2,620	2,980	3,550	3,890	4,730	6,210
3.4	Leather & leather manufactures incl. leather footwear, leather travel goods & leather	800	3,900	7,700	26,000	37,000	40,770	50,570	5,790
3.5	Handicrafts	730	9,520	18,810	61,670	109,570	149,550	167,300	205,010
3.5-1	Gems and jewelry	450	6,180	15,030	52,470	88,960	125,330	141,310	176,440
3.6	Chemicals and allied products	290	2,250	4,980	21,110	39,910	56,880	76,420	98,490
3.7	Machinery, transport & metal manufactures	1,980	8,270	9,540	38,720	71,180	94,840	106,470	145,780
4.Mineral fuels and lubricants		130	280	6,550	9,480	15,200	15,540	16,100	17,610
5.others		1,000	4,660	630	550	620	1,030	1,260	1,740
Total		15,350	67,110	108,950	325,530	536,880	697,510	826,740	1,063,530

(Source: Directorate General of Commercial Intelligence and Statistics)

Table 1.3.4 Trend of Import Value by Main Commodity

(Unit: Rs.million)

Item / Year		1970-71	1980-81	1985-86	1990-91	1992-93	1993-94	1994-95	1995-96
1.Food and live animals chiefly for food		2,420	3,800	8,540	NA	NA	NA	NA	NA
1.1	Cereals and cereal preparation	2,130	1,000	1,100	1,820	9,660	290	920	800
2.Raw materials and intermediate manufactures		8,890	97,600	139,660	NA	NA	NA	NA	NA
2.1	Cashewnuts (Unprocessed)	290	90	240	1,340	3,760	4,830	6,910	7,600
2.2	Crude robber (including synthetic and reclaimed)	40	320	1,010	2,260	2,610	3,420	3,710	7,190
2.3	Fibers	1,270	1,640	2,590	-	NA	NA	NA	NA
2.3-1	Synthetic and regenerated fibers(man-made fibers)	90	970	690	560	710	1,260	4,440	5,020
2.3-2	Raw wool	150	430	980	1,820	3,150	3,720	3,510	4,860
2.3-3	Raw cotton	990	-	130	10	2,180	180	5,070	5,210
2.3-4	Raw jute	0	10	60	200	110	330	620	480
2.4	Petroleum, oil and lubricants	1,360	52,640	49,890	108,160	171,420	180,460	186,130	251,730
2.5	Animal and vegetable oil fats	390	7,090	770	-	NA	NA	NA	NA
2.5-1	Edible oil	230	6,770	7,350	3,260	1,670	1,670	6,240	2,260
2.6	Fertilizers and chemical products	2,170	14,900	32,560	NA	NA	NA	NA	NA
2.6-1	Fertilizers and fertilizer materials	860	8,180	14,360	17,660	28,320	25,910	33,040	56,280
2.6-2	Chemical element and compounds	680	3,580	10,890	22,890	41,340	48,230	73,440	94,030
2.6-3	Dyeing, tanning and coloring material	90	210	560	1,680	1,990	2,870	4,390	5,090
2.6-4	Medical and pharmaceutical products	240	850	1,770	4,680	8,130	8,090	9,370	13,580
2.6-5	Plastic material, regenerated cellulose and artificial resins	80	1,210	3,220	10,950	12,180	13,630	19,030	26,870
2,7	Pulp and waste paper	120	180	2,460	4,580	4,090	4,970	6,350	9,210
2.8	Paper, paper board and manufactures there of	250	1,870	2,260	4,560	5,130	6,960	7,730	15,830
2.9	Non-metallic mineral manufactures	330	5,550	12,010	NA	NA	NA	NA	NA
2.9-1	Pears, precious and semi-precious, unworked or worked	250	4,170	11,000	37,380	70,720	82,630	51,160	70,450
2,10	Iron and steel	1,470	8,520	13,950	21,130	22,540	24,940	36,530	48,380
2.1	Non-ferrous metals	1,190	4,770	5,420	11,020	11,440	15,030	22,540	30,240
3.Capital goods		4,040	19,100	42,850	104,660	108,390	166,630	199,900	282,890
3.1	Manufactures of metals	90	900	2,020	3,020	4,220	5,590	6,480	9,300
3.2	Non-electrical machinery apparatus and appliances including machine tools	2,580	10,890	25,930	4,240	47,880	63,880	92,360	143,710
3.3	Electrical machinery apparatus and appliances	700	260	9,230	1,702	5,880	640	7,890	12,920
3.4	Transport equipment	670	4,720	5,690	1,670	13,380	39,850	34,970	36,970
4.others(Unclassified)		900	4,990	5,530	NA	NA	NA	NA	NA
Total		16,340	125,490	196,580	431,980	633,750	731,010	899,710	1,226,780

(Source: Directorate General of Commercial Intelligence and Statistics)

NA Not available

Table 1.3.5 Trend of Main Countries and Value in Foreign Trade

(Unit: Rs. million)

Ranking		1960-61	1970-71	1980-81	1990-91	1992-93	1993-94	1994-95	1995-96
Export	1	1,730	2,100	12,260	52,550	101,830	144,300	166,100	226,130
		U.K	Russaia	Russia	Russia	USA	Africa	Asia	Asia
	2	1,030	2,070	9,000	47,970	93,420	125,420	157,640	184,660
		U.S.A	U.S.A	Asia	USA	Asia	USA	USA	USA
	3	450	2,040	7,430	46,650	41,600	54,600	63,630	74,110
		Asia	Japan	U.S.A	Asia	Japan	Japan	Japan	Japan
	4	400	1,700	5,980	30,390	41,330	48,280	54,880	67,260
		Africa	U.K	Japan	Japan	#Germanry	#Germany	#Germarny	UK
	5	350	1,660	3,950	25,490	35,140	43,260	53,050	66,140
		Japan	Asia	U.K	#Germary	UK	UK	UK	#Germarny
	6	290	1,290	3,850	21,280	19,790	26,440	31,040	37,480
		Russia	Africa	Germary	UK	Belgium	Belgium	Belgium	Belgium
	7	220	320	3,500	12,590	14,410	20,370	25,340	34,950
		Australia	Germary	Saudi Arabia	Belgium	Africa	Russia	Russia	Russia
	8	200	280	1,520	7,660	13,660	18,160	20,740	16,130
		Germary	Canada	Netherland	France	France	Africa	Africa	Saudi Arabia
	9	180	270	1,470	6,680	12,030	16,040	18,380	12,570
		Canada	Iran	France	Africa	Netherland	Netherland	Netherland	Australia
	10	100	250	1,450	4,190	11,800	16,020	18,280	111,270
		Latin Amc	G.D.R	Belgium	Saudi Arabia	Saudi Alabia	Saudi Arabia	France	Latin Amc
Import	1	3,280	4,530	16,190	60,330	66,680	88,750	130,920	177,230
		USA	USA	USA	Asia	Asia	Asia	Asia	Asia
	2	2,170	1,690	14,310	52,450	62,190	85,840	91,240	129,160
		UK	Africa	Asia	USA	USA	USA	USA	USA
	3	1,230	1,270	13,390	34,730	52,910	58,810	68,670	105,200
		Germany	UK	Iran	Germany	Belgium	Belgium	#Germany	#Germany
	4	640	1,170	10,140	32,450	47,990	56,150	64,050	82,540
		Asia	Canada	Russia	Japan	Germany	#Germany	Japan	Japan
	5	630	1,080	7,530	28,990	43,330	48,360	49,280	67,730
		Africa	Germany	Iraq	Saudi Alabia	Saudi Alabia	Saudi Alabia	Saudi Alabia	Saudi Arabia
	6	610	1,060	7,490	28,940	41,360	48,180	48,950	64,150
		Japan	Russia	Japan	UK	Japan	UK	UK	UK
	7	300	920	7,310	27,180	27,630	47,740	46,480	56,930
		Iran	Iran	UK	Belgium	Kuwait	Japan	Kuwait	Belgium
	8	210	830	6,940	25,480	24,270	35,320	37,890	34,180
		France	Japan	Germany	Russia	Australia	Kuwait	Belgium	Australia
	9	160	540	5,400	14,640	21,490	20,680	28,730	28,640
		Russia	Asia	Saudi Alabia	Australia	Africa	Australia	Australia	Russia
	10	150	370	3,380	13,040	17,220	18,600	26,150	28,120
		Belgium	Australia	Kuwait	France	France	France	Africa	France

(Source: Directorate General of Commercial Intelligence and Statistics)

Russia : Refefrs to formor USSR before 1992-93

: Figures for unifided Germany

1.4 Industry

1.4.1 Agriculture

(1) Agricultural Production

The production value of agriculture, a major industry in India for a long time, increased by 32% at 1980-81 constant price in the last decade.

As to the yield of major crops in 1995-96, sugarcane registered the largest volume of 282.9 million tons, followed by rice (79.6 million tons), wheat (62.6 million tons), potato(19.2 million tons), oilseeds(22.4 million tons), pulses(13.2 million tons), tea(0.8 million tons), rubber(0.5 million tons), coffee(0.2 million tons) and cotton(13.1 million bales)(see Table 1.4.1)

Foodgrains account for about 63% of the total agricultural output in India. Despite the nearly normal monsoon season in 1995, the foodgrains out put of 185 million tons in 1995-96 was lower by over 6 million tons compared to 1994-95 output of 191.5 million tons. This was mainly due to decreases in production of wheat, rice ,bajra and pulses. The volume of rice production was 79.6 million tons in 1995-96, decreasing by 2.2 million tons from the previous year.

Wheat output was 62.6 million tons in 1995-96, decreasing by 3.2 million tons from the preceding year. Due to a sudden rise in temperature during crop season, in February / March , 1996, there was an unexpected decline in production in major wheat granary states except Haryana and Rajasthan.

Sugarcane production amounted to 283 million tons in 1995-96, an increase of 7 million tons over the preceding year.

Cotton production is estimated as 13.1 million bales (170kg each) in 1995-96, showing an increase of 10.1% over the the preceding year(see Table 1.4.2).

In Maharashtra State, the production of foodgrains amounted to 11.7 million tons in 1995-96, accounting for 6.3% of the total in India. In the surrounding areas of Maharashtra State in 1995-96, foodgrain production was estimated to be 4.1 million tons in the state of Gujarat, 9.6 million tons in Rajasthan and 17.8 million tons in Madhya-Pradesh (see Table 1.4.4).

Table 1.4.1 Production of Major Crops

Group/ Commodity	Unit	1980-81	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Foodgrains	tons	129.6	176.4	168.4	179.5	184.3	191.5	185.1
Cereals	tons	119.0	162.1	156.4	166.6	170.9	177.5	171.9
Pulses	tons	10.6	14.3	12.0	12.8	13.3	14.1	13.2
Rice	tons	53.6	74.3	74.7	72.9	80.3	81.8	79.6
Wheat	tons	36.3	55.1	55.7	57.2	59.8	65.8	62.6
Jowar	tons	10.4	1.7	8.1	12.8	11.4	9.0	9.6
Maize	tons	7.0	9.0	8.1	10.0	9.6	8.9	9.4
Bajra	tons	5.3	6.9	4.7	8.9	5.0	7.2	5.4
Gram	tons	4.3	5.4	4.1	4.4	5.0	6.4	5.0
Tur	tons	2.0	2.4	2.1	2.3	2.7	2.1	2.4
Oilseeds	tons	9.4	18.6	18.6	20.1	21.5	21.3	22.4
groundnut	tons	5.0	7.5	7.1	8.6	7.8	8.1	7.8
Rapeseed and mustard	tons	2.3	5.2	5.9	4.8	5.3	5.8	6.1
Sugarcane	tons	154.2	241.0	254.0	228.0	229.7	275.5	282.9
Cotton	balse @	7.0	9.8	9.7	11.4	10.7	11.9	13.1
jute & Mesta	balse @@	8.2	9.2	10.3	8.6	8.4	9.1	8.9
Tea	tons	0.6	0.7	0.7	0.8	0.8	0.8	0.8
Coffee	tons	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Rubber	tons	0.2	0.3	0.4	0.4	0.4	0.5	0.5
Potatoes	tons	9.7	15.2	16.4	15.2	17.4	17.4	19.2

Source: Directorate of Economics & Statistics, Department of Agriculture & Cooperation

Remark @: Bale of 170kg, @@: Bale of 180kg

Table 1.4.2 Trend of Production Volume in Agriculture by Commodity

(Unit: million tons)

Commodity	1970-71	1980-81	1988-89	1989-90	1990-91	1991-92	1992-93
Rice	42.2	53.6	70.5	73.6	74.3	74.7	72.9
Wheat	23.8	36.3	54.1	49.9	55.1	55.7	57.2
Coarse Cereals	30.5	29.0	31.5	34.8	32.7	26.0	36.6
Pulses	11.8	10.6	13.9	12.9	14.3	12.0	12.8
Foodgrains Total	96.6	129.6	169.9	171.0	176.4	168.4	179.5
Kharif	68.9	77.7	95.6	101.0	99.4	91.6	101.5
Rabi	39.5	51.9	74.3	70.1	77.0	76.8	78.0
Oilseeds	9.6	9.4	16.0	16.9	18.6	18.6	20.1
Sugarcane	126.4	154.2	203.3	225.6	241.0	254.0	228.0
Cotton $	4.8	7.0	8.7	11.4	9.8	9.7	11.4
Jute & Mesta $$	6.2	8.2	7.9	8.3	9.2	10.3	8.6

Commodity	1993-94	1994-95	1995-96
Rice	80.3	81.8	79.6
Wheat	59.8	65.8	62.6
Coarse Cereals	30.8	29.9	29.6
Pulses	13.3	14.0	13.2
Foodgrains Total	184.3	191.5	185.0
Kharif	100.4	101.0	98.2
Rabi	83.9	90.4	86.8
Oilseeds	21.5	21.3	22.4
Sugarcane	229.7	275.5	283.0
Cotton $	10.7	11.9	13.1
Jute & Mesta $$	8.4	9.1	8.9

Source: Directorate of Economics and Statistics Department of Agriculture and Cooperation

Remark $: Million bales of 170kg each, $$: Million bales 180kg each

Table 1.4.3 Trend of Area Under Agricultural Crops

(Unit: million hectares)

Commodity	1970-71	1980-81	1988-89	1989-90	1990-91	1991-92
Rice	37.6	40.1	41.7	42.2	42.7	42.7
Wheat	18.2	22.3	24.1	23.5	24.2	23.3
Coarse Cereals	46	418	38.7	37.6	36.3	33.3
Pulses	22.6	22.5	23.1	23.4	24.7	22.5
Oilseeds	16.6	17.6	21.9	22.8	24.1	25.9
Sugarcane	2.6	2.7	3.3	3.4	3.7	3.8
Cotton	7.6	0.2	7.3	7.7	7.4	7.7
Jute & Mesta	0.8	0.9	0.7	0.7	0.8	1.11

Commodity	1992-93	1993-94	1994-95
Rice	41.6	42.5	42.2
Wheat	24.4	25.1	25.6
Coarse Cereals	34.8	32.9	32.6
Pulses	23.7	22.2	23.2
Oilseeds	25.6	26.9	25.3
Sugarcane	3.6	3.4	3.8
Cotton	7.5	7.3	7.9
Jute & Mesta	1.05	0.7	0.7

(Source: Statistical Outline Of India 1992-93, 1994-95, 1996-97)

Table 1.4.4 State-Wise Production of Foodgrains

(Unit: thousand tons)

States	Year	Rice	Wheat	Coarse cereals	Total cereals	Total pulses	Total foodgrains
Maharashtra	1990-91	2,313.7	918.7	7,507.9	10,740.3	1,443.9	12,184.2
	1991-92	2,100.2	625.7	4,707.3	7,433.2	932.6	8,365.8
	1992-93	2,363.8	797.6	9,054.3	12,215.7	1,829.1	14,044.8
	1993-94	2,484.4	1,055.9	7,836.8	11,377.1	2,205.3	13,582.4
	1994-95	2,397.1	111.2	6,318.6	8,826.9	1,697.9	10,524.8
	1995-96	2,562.8	897.7	6,546.3	10,006.8	1,660.9	11,667.7
Gujarat	1990-91	791.1	1,443.7	1,982.1	4,216.9	626.6	4,843.5
	1991-92	690.6	905.7	1,403.5	2,999.8	393.7	3,393.5
	1992-93	829.6	1,360.2	2,571.8	4,761.6	648.1	5,409.7
	1993-94	838.6	928.2	1,473.1	3,239.9	538.1	3,778.0
	1994-95	942.1	1,962.4	1,823.9	4,728.4	518.6	5,247.0
	1995-96	826.6	1,123.5	1,696.5	3,646.6	456.5	4,103.1
Rajasthan	1990-91	142.1	4,308.6	4,765.0	9,215.7	1,718.8	10,934.5
	1991-92	119.5	4,478.4	2,466.5	7,064.4	916.9	7,981.3
	1992-93	174.8	5,147.8	4,698.6	10,021.2	1,457.9	11,479.1
	1993-94	143.1	3,459.5	2,381.1	5,983.7	1,071.1	7,054.8
	1994-95	173.2	5,612.7	3,959.0	9,744.9	1,965.5	11,710.4
	1995-96	117.6	5,496.1	2,492.4	8,106.1	1,462.5	9,568.6
Madhya-Pradesh	1990-91	5,738.1	5,832.6	3,223.1	14,793.8	3,103.9	17,897.7
	1991-92	5,248.5	5,138.0	2,329.2	12,715.7	2,792.4	15,508.1
	1992-93	5,265.9	5,282.9	3,466.1	14,014.9	2,898.2	16,913.1
	1993-94	5,963.1	6,766.6	3,132.9	15,862.6	3,264.6	19,127.2
	1994-95	6,463.0	7,278.6	2,032.9	15,774.5	3,653.8	19,428.3
	1995-96	5,705.1	6,467.9	2,502.0	14,675.0	3,102.2	17,777.2
All India	1990-91	74,291.4	55,134.5	32,699.1	162,125.0	14,265.3	176,390.3
	1991-92	74,677.6	55,689.5	25,991.4	156,358.5	12,014.7	168,373.2
	1992-93	72,867.7	57,210.1	36,590.9	166,668.7	12,814.5	179,483.2
	1993-94	80,298.3	59,840.3	30,817.0	170,955.6	13,304.8	184,260.4
	1994-95	81,814.0	65,767.4	29,876.2	177,457.6	14,037.6	191,495.2
	1995-96	79,618.1	62,620.1	29,616.9	171,855.1	13,191.7	185,046.8

(Source: Directorate of Economics & Statictics, Department of Agriculture & Cooperation)

1.4.2 Manufacturing

(1) Food

The production of sugar amounted to 16.5 million tons in 1995-96, an increase of 1.9 million tons from the previous year. Two years of record output of sugar resulted in accumulation of a large stock. In the sugar season in 1995-96, 0.9 million tons of sugar was exported.

Tea has been a traditional export, and a popular beverage in India. In 1995-96, 730 million kgs of tea was produced which was 34% higher than the preceding year. Export of tea reached 164 million tons.

Coffee plantation farms in Karnataka State account for 53% of the total in India. Arabica and Robusta are the two main varieties grown, accounting for 49% and 51% respectively in area. In 1995-96, the production of coffee was 40,000 tons, 76% of which was exported (see Table 1.4.5).

(2) Textiles

The textile industry is the largest industry in India accounting for about one-fifth of the total industrial output and around one-third of total export earnings, and provides employment for over 20 million people. The production of cotton yarn showed an increase of 5.1% in 1995-96 over the preceding year(see Table 1.4.6).

(3) Fertilizer

Fertilizer consumption of nutrient terms rose from 0.3 million tons to 5.5 million tons in the period from 1960-61 ~ 1980-81 and further increased the following decade to 12.5 million tons; in 1995-96 it is estimated at 13.9 million tons (see Table 1.4.7).

(4) Steel

Production of finished steel is estimated as 21.4 million tons in 1995-96 showing a growth rate of 20% over the preceding year(see Table 1.4.8). The volume of exported steel was 2 million tons in 1995-96.

Table 1.4.5 Production of Food

	1985-86	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96*
1. Sugar (thousand tons)	7,003.0	10,989.0	12,047.0	13,277.0	10,562.0	9,800.0	14,581.0	16,505.0
2. Tea (million kg.)	652.0	700.0	705.0	715.0	735.0	743.0	777.0	730.0
3. Coffee(thousand tons)	160.3	175.0	128.5	141.0	109.0	102.0	43.0	40.0
4. Salt (thousand tons)	10,482.0	10,598.0	12,645.0	14,169.0	14,021.0	14,898.0	11,356.0	12,390.0

Source: 1) Ministry of Food, Directorate of Sugar. 2) Ministry of Commerce, Tea Board.
3) Ministry of Commerce, Coffee Board, 4) Salt Commissioner
Remark: * Provisional

Table 1.4.6 Production of Textile

(Unit: million kg)

	1985-86	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96*
Spun yarn (by cotton textile mills)								
(i)Cotton	1,253	1,372	1,510	1,450	1,402	1,556	1,573	1,654
(ii)Mixed / blended	129	173	207	234	270	306	342	384
(iii)100% Non-Cotton Yarn	72	107	107	122	145	162	165	168
Total	1,454	1,652	1,824	1,806	1,817	2,024	2,080	2,206

Source: Ministry of Texitiles Remark: * Provisional

Table 1.4.7 Production, Imports and Consumption of Fertilizer

(Unit: thousand tons)

	1960-61	1970-71	1980-81	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96*
Nitrogenous fertilizers (N)									
production	98	830	2,164	6,993	7,301	7,430	7,231	7,948	8,777
import	399	477	1,510	414	566	1,137	1,564	1,476	1,938
consumption	210	1,487	3,678	7,997	8,046	8,427	8,789	9,507	9,823
Phosphatic fertilizer (P)									
production	52	229	841	2,052	2,562	2,306	1,816	2,493	2,558
import	-	32	452	1,016	967	689	722	380	647
consumption	53	462	1,214	3,221	3,321	2,844	2,669	2,932	2,898
Potassic fertilizer (K)									
import	20	120	797	1,328	1,236	1,082	880	1,109	1,423
consumption	29	228	624	1,328	1,361	884	908	1,125	1,156
All fertilizer (NPK)									
production	150	1,059	3,005	9,045	9,863	9,736	9,047	10,438	11,335
import	419	629	2,759	2,758	2,769	2,908	3,166	2,965	4,008
consumption	292	2,177	5,516	12,546	12,728	12,155	12,366	13,564	13,877

Source: Ministry of Chemicals & Fertilizers, Department of Fertilizers
Department of Agriculture & Cooperation
Note: * Anticipated

Table 1.4.8 Production of Steel and Metal

(Unit: million tons)

Year	1985-86	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96*
1.Hot metal	10.06	11.96	12.15	14.35	15.00	15.70	17.10	16.20
2.Steel ingots (incl.mini plants)	12.15	13.72	NA	12.63	13.25	13.90	14.70	15.60
3.Semi-finished steel (main plant)	1.73	2.03	4.30	NA	NA	NA	NA	NA
4.Finished steel (incl.secondary producer)	9.49	13.00	13.53	14.33	15.20	15.10	17.80	21.40
5.Steel castings (thousand tons)	93.00	239.00	262.00	393.30	359.40	360.90	383.20	371.10
6.Aluminium (thousand tons)	264.80	427.10	451.10	511.50	487.00	460.70	479.80	518.00
7.Blister copper (thousand tons)	33.60	42.50	40.60	45.10	47.00	56.30	45.60	45.30

Source: 1to5) Development Commissioner for Iron & Steel, 6&7) Ministry of Mines

1.4.3 Mines

(1) Iron Ore

The production of iron ore peaked in 1995-96 at 64.1 million tons. In the period of 1990-91~1994-95, the average volume of iron ore production was over 53 million tons. Annual growth rate increased by 16.7% over the previous year. The volume of export amounted to 31.7% in 1995-96(see Table 1.4.9).

Table 1.4.10 shows the production of major mineral in Maharashtra State (see Table 1.4.10).

Table 1.4.9 Production of Iron Ore

(Unit: million tons)

Year	1985-86	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96*
1.Production	47.7	50.6	53.7	53.9	53.3	56.3	53.4	64.1
annual Growth rate(%)	-	-	5.8%	0.4%	-1.1%	5.3%	-5.4%	16.7%
2.Export	30.1	NA	32.5	NA	22.2	26.9	26.0	31.7
annual Growth rate(%)	-	-	-	-	-	21.2%	-3.3%	21.9%

Source: 1) Ministry of Mines
Remark: * Provisional , NA: Date not available

Table 1.4.10 Major Mineral Production in Maharashtra State

(unit: thousand tons)

	1981	1986	1991	1995	1996 *
Coal	6630	11884	19290	22701	18139
Iron Ore	1059	1285	468	152	136
Limestone	751	1961	5635	6212	4721
Manganese	222	238	294	323	217
Bauxite	298	413	481	641	547

(Source: Indian Bureau of mines, Government of India,Nagpur)
Remark * : provisional

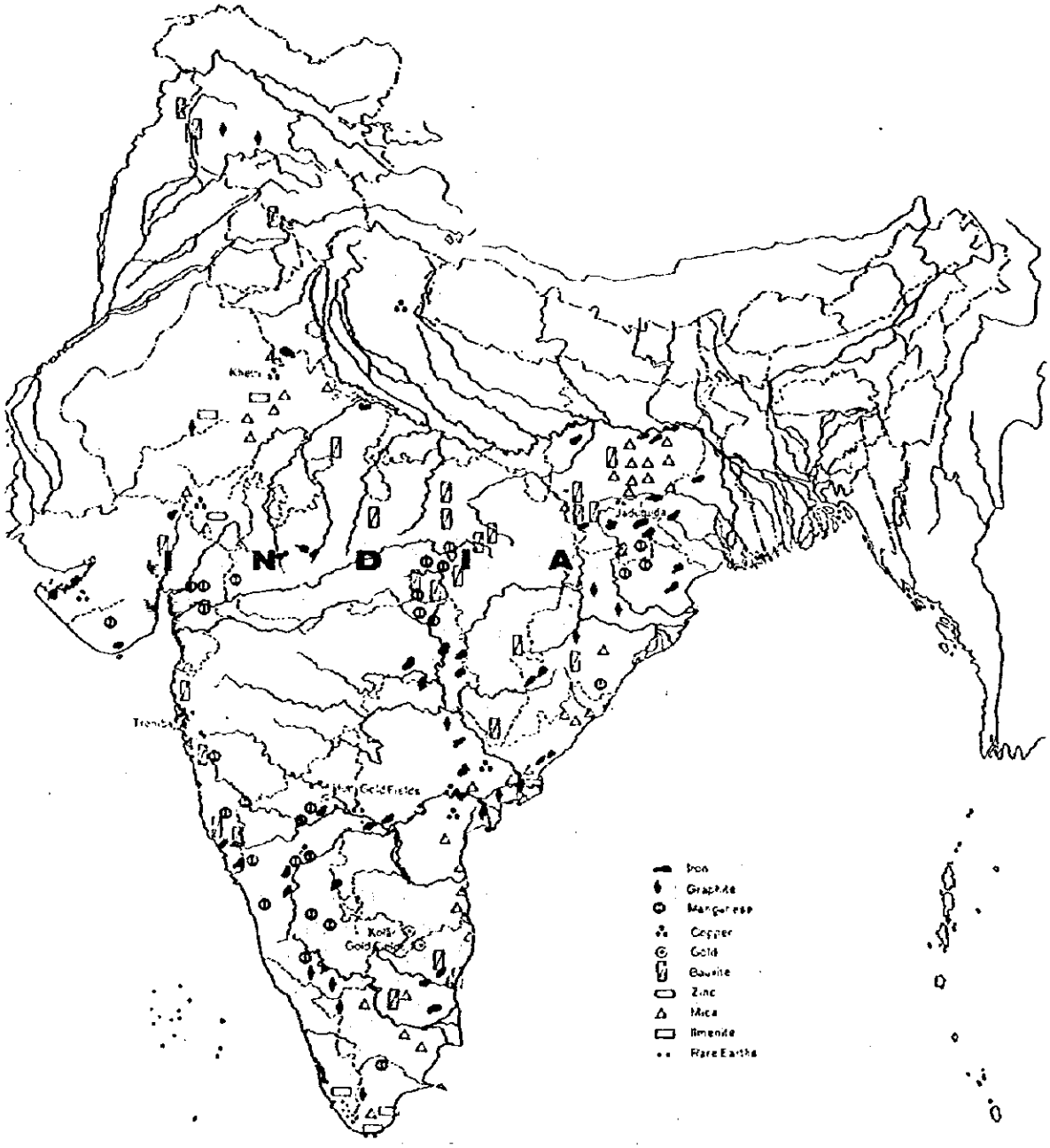

Fig 1.4.1 Distribution Map of Mineral

1.5 Energy

1.5.1 Electric Power

In 1995-96, power generation of India in utility amounted to 380.1 billion kwh, comprising hydro (17.5% of the total in utilities), thermal (72.2%)and nuclear(1.9%). On the other hand , in non-utilities generated energy was 35.1 billion kwh according for the total generation (Table 1.5.1 and Table 1.5.2). The distribution of the power station and the other facilities are shown in Figure 1.5.1.

The main consumers of power are industry, agriculture, transport and household. Among them, the industrial sector is the largest consumer, using 120.9 billion kwh in 1993-94, 2.2 times as much as that in 1980-81. However, the share of industrial sector declined to 46% from 62% in the period of 1980-81 - 1993-94, whereas, agricultural and household sectors increased their share of total power consumption. In the same period , the demand for power exceeded the supply (see Table 1.5.3 and Table 1.5.4).

Energy requirement in 1994-95 was 352.3 billion kwh against the supply of 327.3 kwh (see Table 1.5.5). Central Government has launched a renovation and modernization plan of the thermal and hydro plants to meet the increasing demand.

In Maharashtra State, the installed capacity of electricity generation was 10,039MW in 1995-96. The thermal capacity accounted for 71.3% of the total, followed by hydro (15.9%), natural gas (10.9%) and nuclear (1.9%). The total consumption of electricity in 1995-96 was 45,924 million kwh which was 11.7% higher than the preceding year. By category, there was a 16.1% rise energy consumption used for agriculture, 12.8% for domestic purpose, 11.0% for commercial activities, 8.9% for public lighting and 4.0% for railways (see Table 1.5.6).

Table 1.5.1 Trend of Energy Generated (Gross)

(Unit: billion kWh)

Year	Utilities(1)				Non-Utilities(2)	Total (1)+(2)
	Hydro	Thermal	Nuclear	Total		
1985-86	51.0	114.4	5.0	170.4	13.0	183.4
1986-87	53.8	128.9	5.0	187.7	13.6	201.3
1987-88	47.5	149.9	5.0	202.4	16.9	219.3
1988-89	57.9	157.7	5.8	221.4	19.9	241.3
1989-90	62.1	178.7	4.6	245.4	23.0	268.4
1990-91	71.7	186.5	6.1	264.3	25.1	289.4
1991-92	72.8	208.7	5.5	287.0	28.6	315.6
1992-93	69.8	224.5	6.8	301.1	30.2	331.3
1993-94	70.4	247.7	5.4	323.5	32.1	355.6
1994-95	82.5	262.9	5.6	351.0	33.5	384.5
1995-96	72.5	299.6	8.0	380.1	35.1	415.2

Source: Ministry of Power

Table 1.5.2 Distribution of Generated Sector (Gross)

Year	Utilities(1)				Non-Utilities(2)	Total (1)+(2)
	Hydro	Thermal	Nuclear	Total		
1985-86	28%	62%	3%	93%	7%	100%
1986-87	27%	64%	2%	93%	7%	100%
1987-88	22%	68%	2%	92%	8%	100%
1988-89	24%	65%	2%	92%	8%	100%
1989-90	23%	67%	2%	91%	9%	100%
1990-91	25%	64%	2%	91%	9%	100%
1991-92	23%	66%	2%	91%	9%	100%
1992-93	21%	68%	2%	91%	9%	100%
1993-94	20%	70%	2%	91%	9%	100%
1994-95	21%	68%	1%	91%	9%	100%
1995-96	17%	72%	2%	92%	8%	100%

Source: Ministry of Power

Table 1.5.3 Power Consumption from Utilities and Non-utilities

(Unit: billion kWh)

Year	Industry	Transport	Agriculture	Others	Total
1980-81	55.40	2.27	14.49	17.59	89.74
1990-91	105.35	4.14	50.32	50.34	210.15
1991-92	110.60	4.54	58.56	55.82	229.52
1992-93	116.15	5.09	63.33	60.90	245.27
1993-94	120.91	5.55	70.63	66.51	263.60

Source: Ministry of Power

Table 1.5.4 Distribution of Consumption Sector

(Unit: billion kWh)

Year	Industry	Transport	Agriculture	Others	Total
1980-81	62%	3%	16%	20%	100%
1990-91	50%	2%	24%	24%	100%
1991-92	48%	2%	26%	24%	100%
1992-93	47%	2%	26%	25%	100%
1993-94	46%	2%	27%	25%	100%

Source: Ministry of Power

Table 1.5.5 Power Demand and Supply

(Unit: billion kWh)

Year	Demand(1)	Supply(2)	Deficit(1)-(2)	Deficit(%)
1980-81	120.1	104.9	15.2	12.6
1990-91	267.6	246.6	21.1	7.9
1991-92	289.0	266.4	22.5	7.8
1992-93	305.3	279.8	25.4	8.3
1993-94	322.8	299.0	23.8	7.4
1994-95	352.3	327.3	25.0	7.1
1995-96P	378.2	351.3	26.9	7.1

Source: Ministry of Power

Remark P: provisional

Deficit as % of demand

Table 1.5.6 Electricity Supply in Maharashtra Sate

Item	Year	1994-95	1995-96	Growth rate
		(1)	(2)	%
(A) Installed capacity (in MW)				
	(1) Thermal	7,155	7,155	0
	(2) Hydro	1,602	1,602	0
	(3) Natural gas	1,092	1,092	0
	(4) Nuclear (Maharashtra's Share)	190	190	0
	Total	**10,039**	**10,039**	**0**
(B) Generation(in million kWh)				
	(1) Thermal	35,733	39,794	11.36
	(2) Hydro	6,508	4,482	
	(3) Natural gas	4,336	6,343	46.29
	(4) Nuclear (Maharashtra's Share)	682	702	2.93
	Total	**47,259**	**51,321**	**8.59**
(C) Consumption(in million KWH)				
	(1) Domestic	6,853	7,732	12.83
	(2) Commercial	2,566	2,849	11.03
	(3) Industrial	16,646	18,053	8.45
	(4) Agriculture	11,735	13,621	16.07
	(5) Public Lighting	364	382	4.95
	(6) Railway	1,364	1,419	4.03
	(7) Public Water Works	1,120	1,220	8.93
	(8) Miscellaneous	456	648	42.11
	Total	**41,104**	**45,924**	**11.73**

Source: Economic Survey of Maharashtra 1996-97

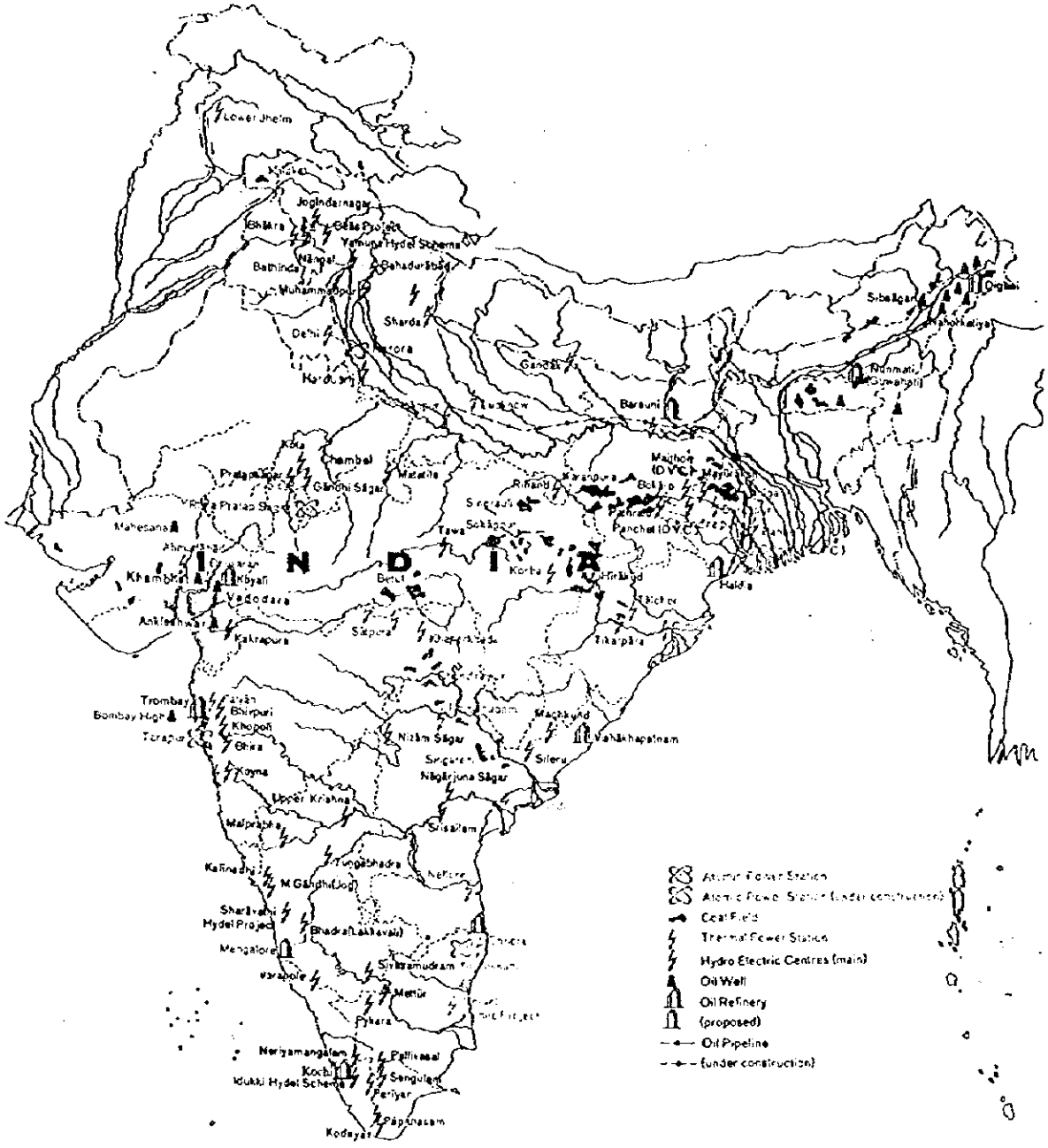

Fig 1.5.1 Distribution Map of Power

1.5.2 Coal

Coal is one of the primary sources of energy accounting for about 67% of the total energy consumption in India. Coal production amounted to around 272.5 million tons in 1994-95 and was estimated as 292 million tons in 1995-96. In the five year period from 1991-1995, annual compound growth rate was 5.4% (see Table 1.5.7).

Table 1.5.7 Trend of The Coal Production

(Unit: million tons)

Year	1985-86	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96*
1.Coal (incl. lignite) Volume	162.3	213.7	225.1	243.9	253.7	262.9	272.5	292
2.Annual growth rate (%)		31.7%	5.3%	8.4%	4.0%	3.6%	3.7%	7.2%

(Source: Ministry of Power)

Remark * : Provisional , @: Include lignite

1.5.3 POL

(1) Crude Oil

The production of crude oil amounted to 35.1 million tons in 1995-96, comprising 11.9 million tons in on-shore and 22.7 million tons in off shore. Domestic production in 1995-96 increased over the preceding year. On the other hand, import of crude increased from 20.7 to 30.8 million tons in the period of 1990-91~ 1993-94 and it decreased by 3.5 million tons up to1995-96. Oil and Natural Gas Corporation Limited (ONGC) contributed 90% of the total crud oil produced in the country in 1995-96 while the rest was produced by Oil India Limited (OIL) and JVCs.

(2) Oil Products

The total refined crude oil throughput in 1995-96 is 58.6 million tons with a growth of 4.1% over the preceding year, supplied by domestic production and import of crude oil. The domestic consumption of oil products (72.6 million tons in 1995-96) exceeded domestic production, and the balance was imported. The grades of oil domestic products are categorized as Naphtha, Kerosene, High speed diesel oil, Fuel oil etc.

Table 1.5.8 Commodity Balance of Petroleum Products

(Unit: million tons)

Commodity Year	1980-81	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96*
I.Crude							
1.Refinery throughput	25.8	51.8	51.4	53.5	54.3	56.3	58.6
2.Domestic production	10.5	33.0	30.4	27.0	27.0	32.2	$35.1
(a) On-shore	5.5	11.8	11.4	11.2	11.6	12.0	11.9
(b) Off-shore	5.0	21.2	19.0	15.8	15.4	20.2	22.7
3.Imports	16.2	20.7	24.0	29.2	30.8	27.3	27.3
4.Export	-	-	-	-	-	-	-
5.Balance(3-4)	16.2	20.7	24.0	29.2	30.8	27.3	27.3
II.Products							
1.Domestic consumption	30.9	55.0	57.0	58.9	60.8	65.5	$$72.6
2.Domestic production	24.1	48.6	48.3	50.4	51.1	52.9	55.1
3.Import	7.3	8.7	9.4	11.3	12.1	14.0	20.3
4.Export	-	2.7	2.9	3.7	4.0	3.3	3.4
5.Balance(3-4)	7.3	6.0	6.5	7.6	8.1	10.7	16.9

Source: Ministry of Petroleum and Natural Gas

Remark *: Provisional, $: Including joint venture companies,

$$: Excludes consumption of 2.1million ton met through private imports

1.6 Government Budget

Table 1.6.1 shows historical trends of the budget of the Central Government. The Indian Budget amounted to 3,395 billion Rupees (Rs) in the fiscal year of 1995-96. Budget for investment for development of infrastructure such as enlargement of power supply, expansion of roads, railways and ports accounted for over 60% of the total budget until 1990-91. Since then ,the proportion of the budget allocated to infrastructure development has gradually decrease, registering 56.1% in 1995-96 (see Table 1.6.1).

The budget of Maharashtra State was 256 billion Rupee (Rs) in 1996-97. Development share accounted for 60.8% of the total budget in 1996-97. In the last three fiscal years from 1994-95 to 1996-97, the development share decreased from 70.4% to 60.8% (see Table 1.6.2).

Table 1.6.1 Trends of Government Budget

(Unit: Rs million)

Item	Year	1980-81	1989-90	1990-91	1991-92	1992-93	1993-94
Total Budget		368,450	1,581,070	1,765,480	1,993,700	2,246,880	2,584,590
	Development	244,260	985,010	1,059,220	1,187,150	1,340,200	1,501,620
	Ordinary	124,190	596,060	706,260	806,550	906,680	1,082,970
Share of Development (%)		66.3	62.3	60.0	59.5	59.6	58.1

Item	Year	1994-95	1995-96
Total Budget		3,043,350	3,394,850
	Development	1,728,270	1,903,980
	Ordinary	1,315,080	1,490,870
Share of Development (%)		56.8	56.1

(source: Economic Division, Department of Economic Affairs, Ministry of Finance)

Table 1.6.2 Trends of Budget of Maharashtra State

(Unit: Rs million)

Item	Year	1970-71	1980-81	1990-91	1994-95	1995-96	1996-97
		(Actual)	(Actual)	(Actual)	(Actual)	(Revised)	(Budget)
Total Budget		7,830	30,940	107,730	200,260	224,530	255,880
	Development	3,900	17,670	72,040	141,050	152,680	155,460
	Ordinary	3,930	13,270	35,690	59,210	71,850	100,420
Share of Development (%)		49.8	57.1	66.9	70.4	68.0	60.8

(Source: Budget-in-Brief, Government of Maharashtra)

1.7 Eighth Five Year Plan (1992-1997)

(1) Objective

The Eighth Five Year Plan (1992-1997) focuses on the following :

(i) Clear prioritization of sector / projects for investment in order to facilitate operation-alisation and implementation of the policy initiatives taken in the areas of fiscal, trade and industrial sectors and human development;

(ii) Making resources for these priority sectors available and ensuring their effective utilisation; and completion of project on schedule avoiding cost and time overruns;

(iii) Creation of a social security net through employment generation, improved health care and provision of extensive education facility throughout the country; and

(iv) Creation of appropriate organization and delivery systems to ensure that the benefits of investment in the social sectors reach the intended beneficiaries.

(2) Based on this approach , the following objectives are given priority :

(i) Generation of adequate employment to achieve near full employment level by the turn of the century;

(ii) Containment of population growth through people's cooperation and an effective scheme of incentive and disincentives;

(iii) Universalisation of elementary education and complete eradication of illiteracy among the people in the age group of 15 to 35 years;

(iv) Provision of safe drinking water and primary health care facilities, including immunisation, accessible to all the villages and the entire population, and complete elimination of scavanging;

(v) Growth and diversification of agriculture to achieve self - sufficiency in food and generate surpluses for export;

(vi) Strengthening the infrastructure(energy, transport, communication, irrigation) in order to support the growth process on a sustainable basis;

1.8 Ninth Five Year Plan (1997-2002)

The Planning Commission of the Indian Government has released the Approach Paper for the Ninth Five Year plan (hereinafter referred to as "the Ninth Plan") spelling out its approach, objectives and emerging issues, macro economic dimensions, development strategy and policy priority, sectoral strategy, cooperative federalism, implementation and delivery systems as a prelude to the formation of the Ninth Plan.

(1) Approach, objectives and emerging issues

The principal function of the Ninth Plan is to develop a shared vision in which each component of the economy plays its role towards a common purpose.

The objectives are: giving priority to agriculture and rural development for generating adequate productive employment and eradication of poverty; accelerating the growth rate of the economy with stable prices; employment of women and disadvantaged groups of society such as Scheduled Castes, Scheduled Tribes and Other Backward Classes and Minorities as agents of socio-economic change and development.

(2) Macro dimension of the plan

The macro-economic performance of the economy that is likely during the Ninth Plan has been worked out on the basis of a model that has been developed specifically for this purpose. In calculating the parameter of the model for the Ninth Plan period, a number of specific assumptions have been made which need to be noted. The detailed quantitative projection of the base-line growth scenario for the Ninth Plan is presented in Table 1.8-1.

Table 1.8.1 Macro Parameters of Base-Line Scenario

Growth Rate (% per annum)	IX Plan	Post Plan
GDP	6.2	6.5
GDP Agriculture sector	4.5	NA
Population	1.7	NA

Note: NA Not available

(3) Development Strategy and Policy Priorities

Allocation of resources to economic sectors is governed by the need for consistency in the role of these sectors to achieve the desired growth and demand pattern. However, allocation to social sectors i.e., health, education needs, poverty alleviation etc., is on the basis of perception of policy makers and planners concerning the of needs of these sectors, within overall constraints of available resources. There is no standard set of criteria for allocation within the sector.

The schemes that should have priority are:

(a) those which provide a larger benefit to the poor compared to the rest,

(b) those which benefit women, children and weaker sections more than the population as a whole,

(c) those which provide larger benefit to backward regions,

(d) those which are non-displacing, empowering and labor intensive ,

(e) those which offer sustainable benefits over the long term (rather than those of a transient nature),

(f) those which help to create of productive assets as compared to raising the current level income.

(4) Sectorial Strategies

Economic development of regions such as North East where adequate growth has not been observed is essential.

The Ninth Plan will identify the gaps in these regions, in infrastructure, social, agriculture sectors etc., and fill the same by supportive measures with prioritized schemes for creation of employment opportunities, provision of basic minimum service, land and water management and flood control, communications, credit availability, industrialization, tourism, export, transport, power and border area development.

(5) Cooperative Federalism

Planning Commission is committed to principles of federalism : all levels of Government and people at large have to participate in the planning process.

(6) Implementation and delivery system

The Ninth Plan will give priority to improving project implementation and delivery mechanism to ensure intended benefits reach the people.

Strategy for the Ninth Plan.

i) Correctives to reverse many unsustainable trends in formulation and implementation of projects/schemes will be introduced.

ii) For infrastructure sector, better utilization of assets, early completion of ongoing projects will be emphasized and priority programs will be identified for formulation and implementation. The general guidelines are mentioned as follows.

a) Projects due for completion in the 8th plan, and in which less then 10% of approved outlay has been spent should be shelved considered for shelving.

b) Projects nearing completion should be accelerated with revised time - cost estimate.

c) Projects for completion in the Ninth Plan and beyond can be plan projects. No details will be needed for them.

d) For other projects justification is needed for continuation.