(I) Indian Ports Overview

(1) History of Port Development in India

Prior to the discovery of the Trans-Atlantic and East-West trade routes to America and the Indian subcontinent, Indian merchants from ancient Indian port cities like Surat, Cochin, and Chennai sailed on their merchant ships across the Bay of Bengal to Java, Sumatra in the Far East and across the Arabian Sea to Persia and East Africa to actively trade in spices, silk, and other exotic commodities.

India's golden age of maritime trade however, was short-lived as it came under increasing domestic, political and economic instability due to the internecine wars and feuds among princely kingdoms that ruled different parts of India.

The three hundred years of British rule, starting with the establishment of the East India Company in 1600 AD witnessed both positive and negative consequences for the Indian maritime industry.

The industrial Revolution in Europe brought about revolutionary changes in shipping. The size of ships used for overseas trade grew larger. The conventional wooden hulls of the ships were soon replaced by steel and the sail was replaced by steam and diesel driven propulsion. These far-reaching technological developments resulted in the establishment of modern ports of Mumbai, Kolkata and Chennai that not only catered to colonial trade but also acted as the centers of British colonial administration. The British merchant ships laden with cotton bales left Mumbai harbour and came back with textiles manufactured by the Manchester Mills, which were dumped into the Indian market.

In the post-independence period, a strong undercurrent of shipping nationalism gave major strategic boost to the development of ports. It encouraged the growth of a strong national merchant fleet through policies of cargo support for Indian flagged vessels, especially to the Shipping Corporation of India (SCI). It also provided protection to coastal shipping and state canalization of exports and imports through agencies like Indian Oil Corporation (IOC), State Trading Corporation (STC) and Minerals & Metals Trading Corporation (MMTC) etc. to achieve economic self-reliance. Considering, India's import dependence on food grains, petroleum and capital goods, concomitant with the policy of the government to undertake core industry development (including shipping and shipyards) in the public sector, the government chose to actively intervene in the development of maritime sector and thereby meet the expectations of national security and economic well-being.

(2) Introduction to the Indian Ports Sector

There are 12 Major Ports and 139 operable Minor Ports located along the 5,560 km long coastline of India. The Port Trust of India under Central Government jurisdiction manages the

12 major ports and 139 minor operable ports are managed under the jurisdiction of the respective State Governments.

Table 1: Major Ports Of India

(Million Tonnes)

Port	State	Date of Incorporation	Capacity
East Coast			
Calcutta/Haldia	West Bengal	October, 1870	38.50
Paradip	Orissa	April, 1966	13.55
Vizag	Andhra Pradesh	1933	32.30
Chennai	Tamil Nadu	1875	27.62
Tuticorin	Tamil Nadu	July, 1974	12.50
West Coast			
Cochin	Kerala	1936	13.45
New Mangalore	Karnataka	May, 1974	20.25
Marmugao	Goa	1963	19.98
Mumbai	Maharashtra	17th Century	37.50
JNPT	Maharashtra	May, 1989	18.80
Kandla	Gujarat	January, 1952	41.00

Four out of the twelve Major Ports - Calcutta, Chennai, Mormugao, and Mumbai are more than a hundred years old. The Cochin and Visakhapatnam ports are more than fifty years old. The ports of Kandla, New Mangalore, Paradip and Tuticorin were developed after independence. Jawaharlal Nehru Port became operational in 1989. The latest additions to the Major Ports and the first corporatised major Indian port, Ennore port, stared its operation in 2001.

Of the 139 operable Minor Ports, the majority is situated in the West Coast and 76% of the throughput occurs in the state of Gujarat. The share of minor ports in the sea borne trade has increased from 2% in 1950-50 to 24% in 2000-01.

The Indian Ports Act, 1908 and the Major Port Trusts Act, 1963, govern the major ports. The government has set up a Tariff Authority for Major Ports (TAMP) set up under the Major Port Trusts Act, 1963 to fix and revise various port charges to be collected by private providers of port facilities. The minor ports are governed by the respective State Governments.

India is dependent on its national ports system to ensure sustainable economic growth through expanding export trade and timely availability of imports for local industrial inputs. While accounting for almost 95 percent of the country's foreign trade in terms of volume and 75 percent in terms of value, the annual tonnage of India's sea born commerce is moderate at present compared to some of Asia's other economies such as China, Singapore, Japan.

Indian Sea borne trade has grown from 21 million tonnes in 1950-51 to 368 million tonnes in 2000-01. The sea borne trade is expected to touch 565 million tonnes by 2006-07, at a CAGR of 8 percent. The main commodities handled at the country's major ports are Petroleum, Oil & Lubricants (POL), iron ore and coal. Cargo volumes were moderate until 1990, reflecting a closed economy where import-substitution policies limited the commercial interchange with the outside world. The Government's adoption of trade liberalizing measures since 1991 has produced significant increases in cargo traffic through the Indian ports.

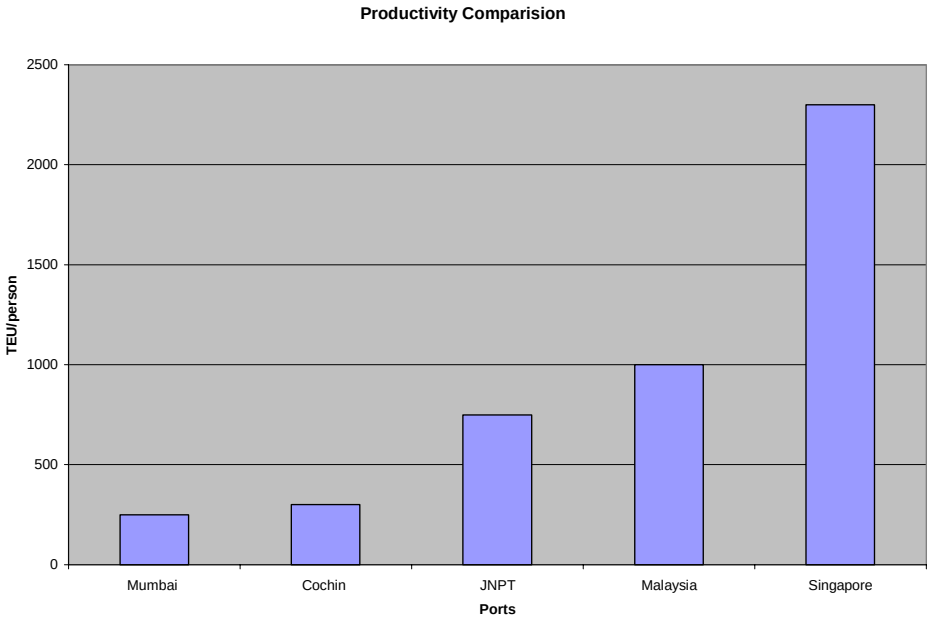
The productivity of Indian ports has improved over the past five years, with a reduction in average pre-berth detention and turnaround time. But, the productivity of Indian ports is still quite low by international standards.

Table 2.1: Productivity at Major Ports

Ports	FY97	FY02	FY03
Cargo Handled (mn te)	265	362	231
Avg. Pre-berthing detentions (no of days)	1.7	0.6	0.3
Labour Productivity (O/p per gang ship)	307	413	437
Avg. Turn Around time (no of days)	7.5	3.8	3.1
Output per ship berth day (te)	4497	6469	6700

The Indian ports are inefficient at handling the present traffic on account of various structural and organizational weaknesses. Hence, modernization and development of major and minor ports has been an essential part of India's five-year plan program.

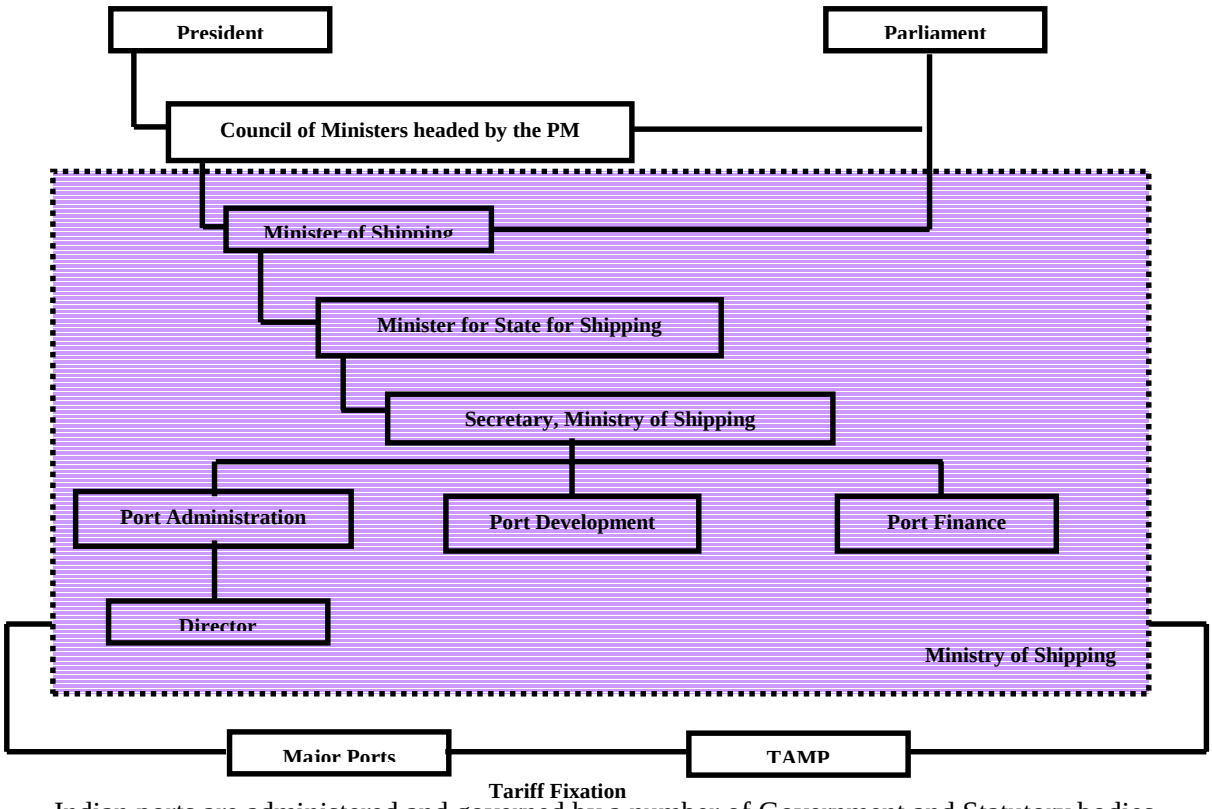
Chart 2.1: Productivity: A Comparison



(3) Institutional Framework

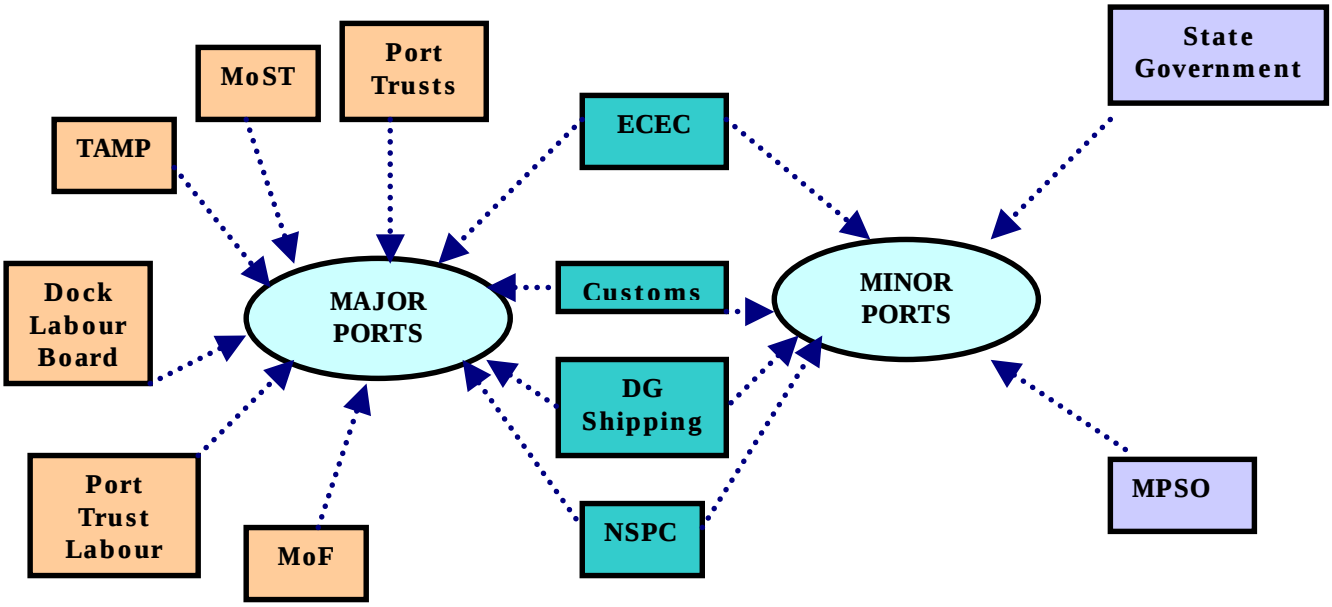
Major ports are under the control of the Ministry of Shipping (MOS). In 1997, the Tariff Authority for Major Ports (TAMP) was formed to act as a tariff regulator for the Major Ports. Figure 3.1 shows the institutional relationships among MOS, TAMP and the Major Ports, and the relationship of MOS to the Council of Ministers and Parliament.

Figure 3.1: Institutional Structure for the Major Ports Sector in India



Indian ports are administered and governed by a number of Government and Statutory bodies.

Figure 3.2: Institutional Structure for the Ports Sector in India



(a) Ministry of Surface Transport/ Ministry of Shipping

The Major Ports were erstwhile controlled by the Ministry of Surface Transport (MoST). The MoST is now divided into two Ministries i.e. Ministry of Shipping and Ministry of Road Transport & Highways. The Major Ports now come under the preview of Ministry of Shipping. It encompasses within its fold Shipping, that includes ship building and ship repair, Major Ports, national waterways, ship chartering and inland water transport. Ministry of Shipping has been entrusted with the responsibility to formulate policies and programs on these subjects and their implementation.

(b) Maritime States Development Council

To have an integrated approach towards the development of Major and Minor Ports, the Maritime States Development Council (MSDC) has been formed under the chairmanship of the Union Minister of Shipping and with Ministries in-Charge of ports from Maritime States as Members. It is a forum for framing an integrated policy for the entire Indian Port Sector, including the Minor Ports.

(c) Empowered Committee on Environment Clearances

An Empowered Committee on Environment Clearances (ECEC) has been constituted. In this regard, transparent and simplified guidelines for environment clearance have been issued. The ECEC has quickened the pace of environmental clearance to port projects and ensuring that the goals of development and environmental protection are balanced.

(d) Port Trusts and Board of Trustees

Port Trusts are established as “Local Bodies” (As defined by the General Clauses Act, Central and States - 1897. “Local Authority” means a municipal committee, district board, body of port commissioners or other authority legally entitled to, or entrusted by the Government with the control or management of a municipal or local fund.) They are responsible for the management and administration of the Major Ports.

(e) Dock Labour Board & Port Trust Labour

In Indian Ports, labour is organized under two schemes:

(i) Port Trust Labour (employed on shore, in transit sheds and warehouses) and

(ii) Dock Labour registered with the Dock Labour Boards for cargo handling onboard ships.

(The ports of Tuticorin, New Mangalore and Paradip do not have a Dock Labour Scheme. Labour is organized in a common pool and is administered by stevedoring companies. JNPT employs all labour itself.) The Dock Labour Board (DLB) is a tripartite body comprising equal representation from the GOI, Dockworkers and Employers of dockworkers and shipping companies. Headed by the Chairmen of the Port Trust, the DLBs administer registered dockworkers and assure employment for 21 days in a month. The stevedores employ the dockworkers as per requirement and pay a fee including a levy to finance compensatory payments when there is no work.

(f) Navigational Safety in Ports Committee

This committee is charged with the responsibility of technical clearance to proposals relating to navigational safety covering areas like hydrographic surveys, navigational charts, navigational aids, Pilotage, etc. All port development authorities, whether be it of Major Port, Minor Port, state government, captive user or private party, have to obtain the clearance of the Committee before the port facilities are declared operational.

(4) Legislative Framework

The primary legislations that govern the port sector are:

(a) The Indian Ports Act, 1908
(b) The Major Port Trusts Act, 1963
(c) Merchant Shipping Act, 1854
(d) The Inland Vessels Act, 1917
(e) Land Acquisition Act, 1956
(f) Foreign Exchange Regulation Act, 1973
(g) Income Tax Act, 1961 and Income Tax Rules, 1961
(h) Foreign Trade (Development and Regulation) Act, 1992
(i) Indian Customs Act, 1962
(j) Contract Labour (Regulation and Abolition) Act, 1970
(k) Dock Workers (Regulation & Employment) Act, 1948
(l) Environment (Protection) Act, 1986 and Environment (Protection) Rules, 1986

(a) Indian Ports Act, 1908 (IPA)

The Indian Ports Act, 1908, primarily covers the enactments relating to ports and port charges. The IPA covers all the ports, existing and prospective, and brings them under the ambit of the Government. The definition of "Government" under the IPA

covers; the Central Government in case of Major Ports and the State Government in case of all other ports (both Minor and Intermediate).

'Major Port' means any port that the Central Government may by notification in the Official Gazette declare, or may under any law for the time being in force have declared, to be a Major Port. The IPA empowers the State Government to extend this act, to any port in which this act is not in force.

Indian Ports Act, 1908 enables the Government to:

(i) Extend this act, by notification, to any port in which this act is not in force or to nay part of any navigable river or channel, which leads to a port, and in which this Act is not in force.

(ii) Grant licenses to persons engaged in providing cargo handling and other facilities at the port sites.

(iii) Appoint, an officer or a body of persons, as a conservator for each port.

(iv) Levy port dues and wharfage charges from time to time. In case of Major Ports, the Authority constituted under the Major Port Trusts Act, Tariff Authority for Major Ports is responsible for fixing and revision of the tariff and tariff collection. In the case of Minor Ports the State Government appoints an officer or a body of persons at every port to collect the port dues on behalf of the Government (However it does not fix or revises tariffs). The funds so collected are to be deposited into a separate account called the port fund account. The receipt as well as the expenditure of this fund is subject to the control of the Government.

(v) Rules for safety of shipping and the conservation of ports.

(vi) Supplemental provisions giving details regarding publication of orders of Government, services of written notices of directors, duties of the authority during emergency and so forth.

(vii) Co-operation to be provided by the port officials for defense activities

(viii) Duties of port officials during national emergency

(ix) And finally schedules for ports, state – wise, regarding vessels chargeable, rate of port-dues and frequency of payment of port-dues.

Table 2: Domain of Authority

	Major Ports	Other Ports
Safety & Conservancy	*Central Government*	*State Government*
Health	*Central Government*	*Central Government*
Pilotage requirements	*Central Government*	*State Government*
Port dues and Collection	*Tariff Authority*	*State Government*
Dues for facilities	*Tariff Authority*	*State Government*
Dues for services to vessels	*Tariff Authority*	*State Government*

(b) The Major Port Trust (Amendment) Bill, 2001

The amendment relates to two issues relating corporatisation:

(i) To include an enabling provision in the MPT Act for empowering the Government to denotify major ports from the ambit of the Act before converting them into corporate entities,

(ii) The amendment focuses on Section 29 of the Act, which will allow the Government to transfer its assets, rights and liabilities in the port from the board of trustees to the new corporate entity.

The other features in the proposed amendment, to enable private sector participation in port facilities are:

(i) Right to lease of port's immovable (wharf age rights, all other rights exercisable on, over or in respect of any land, wharf, dock or pier) and movable property (Land, existing berths/super structure/equipment's etc.)

(ii) Right to Construct/install wharf, dock, quay, stage, jetty, pier erection or mooring and reclamation of foreshore within the port limit by private parties.

(iii) Allow to perform of any of the services to be rendered by the ports such as piloting, hauling, mooring, landing, shipping or transshipping passengers etc by private party on terms and conditions fixed with the approval of Central Government and recovery of charges by the private party for the service rendered by them.

(iv) The Port will continue to maintain its regulatory role; lease, form, sell or alienate the rights of the Board to levy rates to other party with the approval of Government.

(c) Tariff Authority for Major Ports (TAMP)

The Port Sector was opened to private participation in FY91 to increase capacity and to introduce modern management practices. Subsequent to the opening up of the Port

Sector in pursuance of economic reforms policy, the Major Port Trusts Act, was amended in 1997 and the Tariff Authority for Major Ports (TAMP) was constituted in April 1997 for regulating the tariffs of the Major Port trusts and private terminal operators. However there is no independent statute governing the TAMP

Minor or intermediate ports (private or otherwise) come under the jurisdiction of the State Governments and are not regulated by TAMP. 'Safety' and 'conservancy' aspects of Major Ports as well as port development' activities are not within the jurisdiction of TAMP.

(i) Role of TAMP

(1) TAMP is concerned with the regulation of all tariffs, both vessel related and cargo-related, of Major Ports and private terminals. It is expected to regulate not merely tariffs but also the conditionality governing the tariffs.

(2) TAMP shall regulate the lease rentals for using the properties of the Major Port trusts and private terminal operators at those ports.

(3) TAMP shall rationalise the tariff structure and establish systems for setting tariff.

(4) TAMP shall frame Indian port tariffs at internationally competitive levels.

(5) TAMP shall deal with all tariffs and tariff-related items only of the Major Ports and private Terminal Operators.

(6) TAMP shall govern all conditions that influence the applications of rates and tariffs. TAMP aims to use tariffs as a lever to increase operational efficiency

(7) TAMP may fix the fees for pilotage, hauling, mooring and other services rendered to vessels at such rates as thought appropriate by it

(ii) Activities undertaken by TAMP

Prior to the formation of TAMP each Major Port had its own tariff schedules, scales and accounting procedures. TAMP has been successful in implementing uniform procedures and maintaining consistency in tariffs across all Major Ports.

TAMP has successfully implemented at a few places a model of calculating tariffs based on the marginal costing, volume discount schemes, particularly in the case of captive facilities, mono-cargo berths, and bulk cargo operations.

TAMP has rationalised berth hire charges to hourly charges.

(iii) Key issues relating to TAMP

There is a need to revise the tariff policy and phase out cross subsidies to achieve competitive pricing.

(1) In the present scenario of modernisation and corporatisation of ports, it is essential that Major Ports should have the liberty to fix port tariff on their own. The jurisdiction of TAMP is confined only to fixing and revising the tariff of Major Ports and Minor Ports are not covered by it. This situation gives Private operators an opportunity to lower tariffs without formal clearance, whereas Port Trusts cannot do so. This gives private players an edge over the Major Port Trusts.

(2) Cross-subsidisation needs to be phased out over a period of years so as to minimize the risk of diversion of cargo and give time to ports to improve efficiencies and reduce costs.

(3) TAMP as an appellate authority

The need of the hour is an appellate body to hear grievances and look into issues such as undercutting, predatory pricing and providing a level playing field.

(5) State Maritime Boards Act

Maritime States are responsible for the planning and development of Other Ports within their region. For speedy implementation of their plans, each of the states of Gujarat, Maharashtra, Andhra Pradesh and Tamil Nadu have constituted autonomous regulatory bodies, namely Maritime Boards. Salient features of policy formulated by the Maritime States on private sector participation at Other Ports are:

(a) Government land will be given on lease. The concession period will be 30 years, which can be further extended to 20 years.

(b) In selected ports in Gujarat and Maharashtra, the Government will take equity shares to reduce the necessary level of private investment; while the Kerala Government will

provide basic facilities, viz, break waters, capital dredging, navigational aids and communication equipment.

(c) Back up infrastructure of the port will be provided by the Government.

(d) Development will be on BOST, BOMST, BOOT or BOT basis varying from state to state.

(e) The company responsible for developing and running the port will have complete freedom in fixing tariffs for all services except for in state of Maharashtra.

(f) The Government shall collect a percentage of the revenue earned by the Port Company.

(g) The role of the Government will be limited only to areas where it is necessary and appropriate under any statute, national interest/security, etc.

(6) Growth In Traffic And Performance

(a) Traffic

The total volume of the traffic handled by all the Indian ports during 2004-05 was around 515 million tonnes, of which 381.04 million tonnes, i.e. around 75 percent was handled by Major Ports and remaining 133.8 million tonnes by the non-major ports. The traffic share of Major Ports & Non major ports during last five years is presented as under:

Table 2: Traffic Trends at Indian Ports

(Million Tonnes)

Year	Major Ports	Non-Major Ports	Total
1950 – 51	20.01	2.5	22.51
1960 – 61	39.63	4.4	44.03
1970 – 71	58.14	7.9	66.04
1980 – 81	80.51	10	90.51
1990 – 91	152.85	12.78	165.63
1995 – 96	215.34	25.71	241.05
2001 – 02	287.59	98	385.59
2004 - 05	381.04	133.8	514.84

Source: IPA

(b) Commodity Profile

The cargo handled in Major ports can be broadly classified under the following categories:

(i) Liquid Bulk

For handling Liquid cargo specialized Liquid Bulk Cargo Terminals exist at Major Ports. The Terminals have dedicated pipelines and at certain ports like Mumbai, Chennai, New Mangalore, there are marine loading arms to connect the shore pipelines to the ship for loading/unloading of the liquid bulk. At other Ports, connection is done through flexible pipelines.

(ii) Dry Bulk

In case of Dry Bulk Cargo, the Major Ports handle a variety of dry bulk cargo such as Iron Ore, Coal, Fertilizers and Food Grains and a number of other mineral cargoes. For handling Iron Ore, fully dedicated and automated handling facilities exist in the ports of Mormugao, New Mangalore, Chennai, Visakhapatnam and Paradip. Similar facilities for handling coal also exist in the ports of Tuticorin, Chennai, Paradip and Haldia.

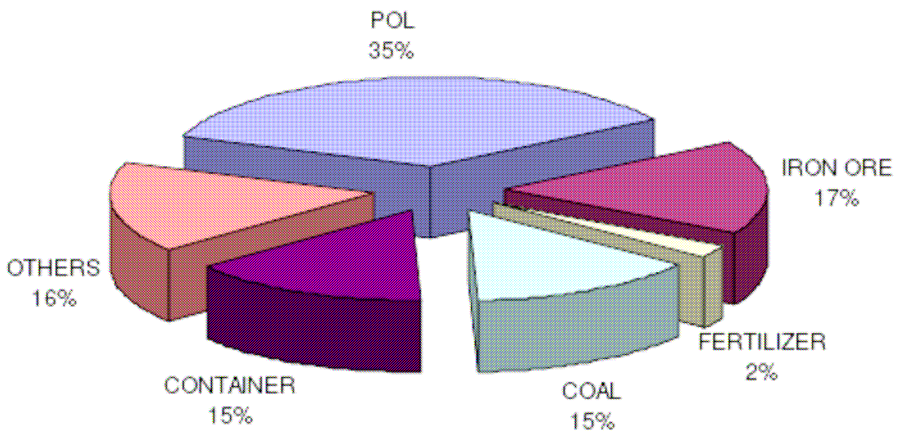
(iii) Containers

For handling containers, dedicated terminals exist at the Ports of Jawaharlal Nehru, Mumbai, Cochin, Tuticorin, Chennai and Calcutta.

(iv) Other Cargo

For Handling other cargo, which consists primarily of steel materials such as, tell coils, angles, channels, etc and cargo in varied type of packages, and equipments like Wharf crane, Fork Lift Truck and Mobile crane are used.

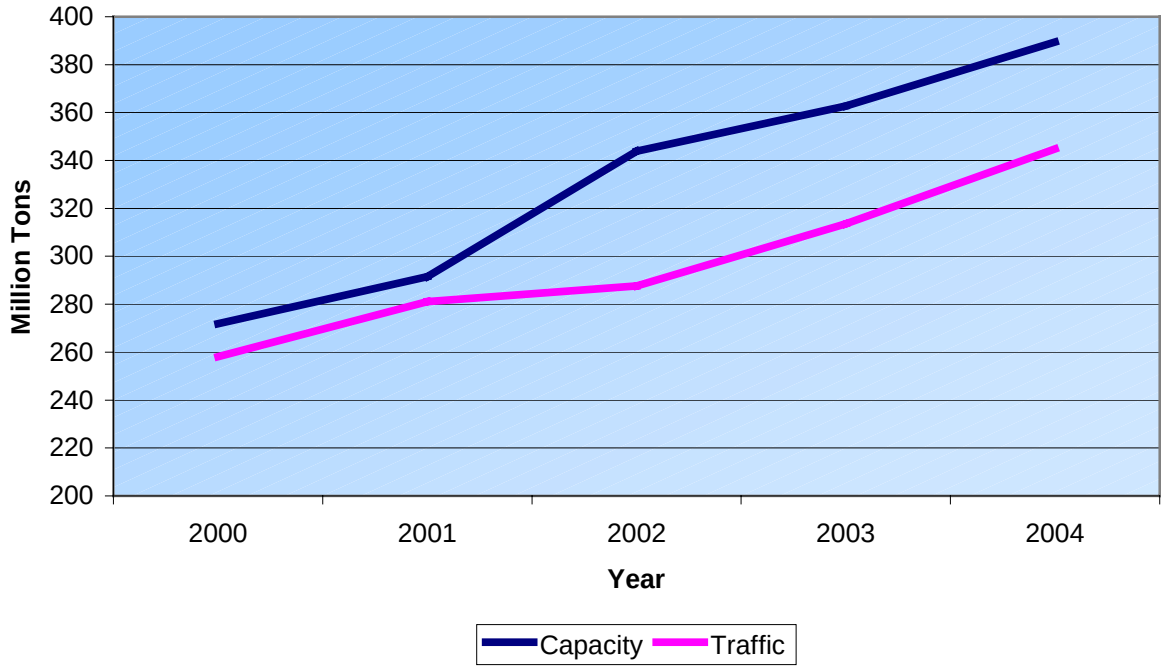
Chart 1: Traffic – Principal Commodities



(7) Port Capacity

Till 2000-01, most Major Ports operated at more than or near saturation levels of their handling capacities, resulting in high pre-berthing detention and turn round time of vessels.

Chart ____: Port Capacity and Actual Traffic



(8) Issues Relating to the Ports

(a) Institutional Issues

(i) Lack of professional management at the ports

Most ports are administered by Indian Administrative Services (IAS) officers, who are appointed for a fixed period of three to four years. They do not have port experience, so during their tenure they administer the ports as per the rules and regulations approved by the government.

(ii) Bureaucratic mindset

This kind of mindset results in inflexibility in rules, multiplicity of clearances, delay in obtaining clearances etc.

(iii) Too large Board Structure

The trust boards have approx. 19 trustees with varied backgrounds. This includes government nominees, political appointees, representations from user organizations and companies, labour trustees etc. These groups represent their fields and often there is a conflict of interest, affecting the operations of the port.

(iv) Labour Unions

The process of privatization and modernization is affected by labour unions at the ports. Some issues associated with port labour include: gang system of work allocation that leads to over-manning and inefficiency, speed money payments, excess labour, frequent strikes etc.

(v) Regulatory Authorities

There is involvement of a large number of government and statutory bodies in the port. Typically a Major port is governed by at least nine bodies namely, MoST, MoF, Tariff Authority, Dock Labour Board, Customs, DG Shipping, Port Trusts etc.

(b) Infrastructure Issues

(i) The gradual improvement in inland logistics with the construction of CONCOR rail operations and national highways can negatively affect the traffic at ports.

(ii) It has been difficult for the private sector to undertake port projects due to poor connectivity infrastructure and issues related to environmental clearances.

(c) Financial Issues

Efforts to establish private terminals in the ports have been slow as these Projects are capital intensive and with the lack of long-term capital markets, the private sector finds it difficult to finance these projects.