1 INTRODUCTION

1.1 Ports and the Indian Economy

Ports play a pivotal role in stimulating economic activity in their surroundings and hinterland through the promotion of seaborne trade. In India, they handle 95 *per cent* of the country's international trade cargo by volume and 70 *per cent* by value. The sector is broadly categorised into major and non-major^{1a} ports. There are 12 major ports, out of which 11 function as autonomous bodies under the Ministry of Shipping^{1b} (Ministry), Government of India and are governed by the Major Port Trusts (MPT) Act, 1963. The twelfth major port, located at Ennore, is a corporatised

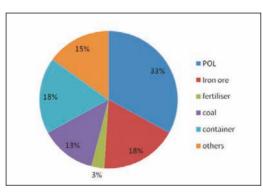


Fig 1.1

one under the same Ministry. Apart from these, there are 187 notified non-major ports across 13 maritime States. The 12 major ports handle about three- fourths of the cargo traffic of the country. These ports handled 383.75 million tonnes (MT) of cargo in 2004-05. Anticipating a rapid rise in traffic along with robust growth of the economy, the Ministry drew up (2005-06) the National Maritime Development Programme (NMDP). The objective of NMDP was to increase the capacity of major ports to 650.90 MT by March 2009.

During 2008-09, the actual handling by the ports rose to 530.37 MT against a reported capacity of 576.09 MT of cargo, registering a 38 *per cent* rise in volume in five years. The cargo-mix is shown in Fig 1.1.

1.2 Profiles of Major Ports

The 11 major ports are strategically located along the 7517 km coastline of India with six ports on the west and five on the east coast, having a shared hinterland. The first six autonomous port trusts set up under the MPT Act 1963 included the three legacy ports of Chennai, Kolkata and Mumbai along with the ports of Cochin, Tuticorin and Visakhapatnam. Subsequently, five other ports viz. Jawaharlal Nehru Port (JNPT), Kandla, Mormugao, New Mangalore and Paradip were added to the list. A brief profile of these ports is presented overleaf.

¹aNon-major ports include minor ports, notified under the Indian Ports Act, 1908 and managed by State Maritime Boards, intermediate ports developed under public-private partnerships and private ports. The cargo share of the non- major ports in Gujarat was 75 *per cent* of the total volume handled at all non-major ports in India in 2008-09.

^{1b} Erstwhile Ministry of Shipping Road Transport and Highways.

Major ports at a glance

Kandla port (KPT): (Gulf of Kutch)

Multicargo handling facilities. Handles POL (62%), fertilizers, foodgrains and salt. Handled 72 MT in 08-09, the highest in India.

Has sufficient land for expansion. Lacks depth.

Faces stiff competition from ports like Sikka and Mundra developed by Gujarat Maritime Board and upcoming private ports like Pipavav and Hazira.

Mumbai port (MbPT): Old city-based port. Natural harbour. Multicargo capability. Handles POL (60%), break bulk and thermal coal. Handled 52 MT in 08-09.

Three enclosed docks with locks. Largest holder of property (753 ha) in Mumbai. Huge immediate hinterland. Primarily suffers from depth limitations and outdated equipment

Kolkata port (KoPT): Old riverine port with long channel (232km). Multicargo facilities. Handles POL, iron ore and coking coal at Haldia, and containers at Kolkata Dock System (KDS). Handled 54 MT in 08-09, ranking fifth in India

Impounded dock systems with locks. Satellite impounded dock system developed at Haldia in 1977, closer to the sea and about 140 km downstream of KDS.

Enjoys a large hinterland and good rail connectivity. Heavy siltation in the river causes severe depth limitation at both KDS and Haldia (lowest in India) .Regular dredging, valuing more than Rs 250 crore, is carried out with 100% budgetary support. Inland waterway connectivity, is underutilised.

Jawaharlal Nehru port (JNPT):

Came up in 1989.

India's premier container port. Handles 60% of all containers. Handled 52 MT in 08-09.

Shares access channel with Mumbai. Highly efficient container handling. Lacks depth.

Paradip port (PPT):

Handles dry bulk (94%) like coal, iron ore and fertilizers. Handled 46 MT in 08-09.

Located near mineral rich hinterland, Needs to improve connectivity, mechanisation and labour productivity.

Mormugao port (MGPT):

Handles iron ore (80%), coal and POL. Handled 42 MT in 08-09.

Enjoys good inland waterways. Lacks road and rail connectivity.

Part loading of vessels occur outside the berths for lack of depth.

Visakhapatnam port (VPT): Deep water port at outer harbour.

Multiple handling facilities. Handles dry bulk (iron ore, coal and POL). Handled 64MT in 08-09, second highest in India. Good railway links. Mechanised handling of iron ore. Efficient pilot services. Draft mismatch between channel and berths. Faces challenge from Gangavaram port.

New Mangalore port (NMPT): Deep water port handling POL, iron ore, coking coal and other dry bulk. Handled 36 MT in 08-09. Calling vessels suffer high turn-round time. Dry bulk handling facilities are non-mechanised.

Cochin port (CoPT): On Willingdon island. Berths on two backwater channels. Handles POL (73%) and containers. Handled 15 MT in 08-09, lowest in India. Volumes stagnant for last three years. Lies close to the international east-west shipping route and plans to become a major international trans-shipment hub. International container terminal

Lacks depth and has outdated equipment (94 %),

Poor rail links and labour productivity.

being developed.

Chennai port (ChPT): Old city based port. Has 24 berths in three docks and multiple cargo capability. Handles containers (35%), POL, coal, automobiles. Handled 57 MT in 08-09, third highest in India.

Enjoys depth and connectivity.

Depth mismatch between channel and berths, handling inefficiency and road traffic restrictions. Dust pollution is a major concern.

Tuticorin port (TPT): Artificial harbour with eight berths. Handles thermal coal, containers and general cargo. Handled 22 MT in 2008-09.

Close to international shipping route

High efficiency in container handling,

Does not need regular dredging due to rocky bed. Suffers from depth limitations and inadequate rail links.

1.3 Recent Developments

Among the major ports, wide variations in performance and productivity were noticed due to differences in the nature of cargo handled, nautical access, economies of scale and frequency of ship calls. To transform Indian ports into world-class facilities suited to the requirements of the future, the Ministry mandated that each major port should develop its own long-term business plan. The Port of Rotterdam was appointed as an adviser to the Ministry to review the process of development of the business plans. Subsequently, each of the ports engaged consortia of national and international consultants to prepare their business plans. The exercise was completed in 2007. SWOT analyses done for the ports indicated, *inter alia*, that they were suffering from limited water depths, old infrastructure, inefficient handling systems, poor hinterland connectivity, overstaffing and poor quality of services. The study also indicated that the dominant market share of the huge Indian hinterland and locational advantages were among

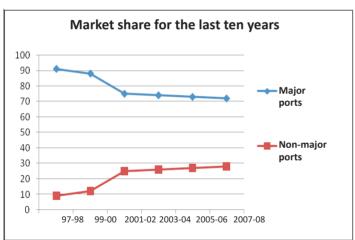


Fig 1.2

the primary strengths of these ports.

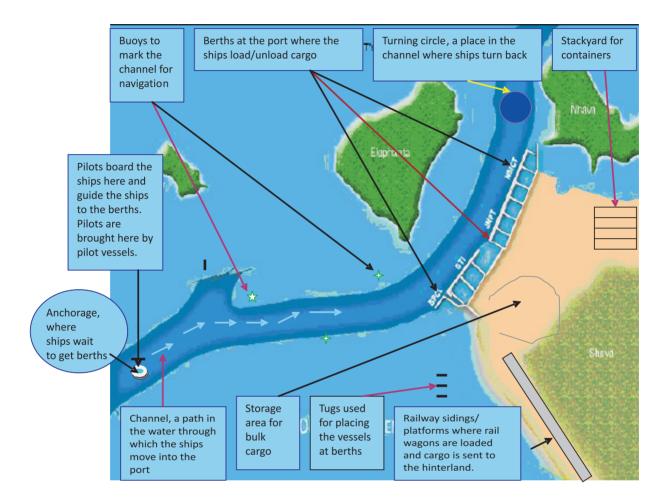
It is, however, important to note that the market share of the major ports have steadily declined over the last 10 years (see Fig 1.2) in the face of growing competition from the rapidly developing non-major ports. Keeping in view the prominence that the major ports have enjoyed in India's economic development, the scenario of steady decline in cargo share at major ports and weaknesses in the implementation of capacity augmentation schemes,

the Government formulated (2006) NMDP to facilitate enhanced private investment, improve service quality and promote competitiveness by identifying specific schemes/projects and other measures. The schemes were planned to be implemented in two overlapping phases: Phase I (2005-2009) and Phase II (2007-2012). Although most of the ports had drawn up ambitious² long- term plans, there were a number of material issues that affected their service delivery. To analyse such issues, a performance audit of the functioning of these major ports was taken up in August 2008.

²In their vision statements included in their business plans, most ports aimed to develop themselves as hub ports in the South Asian region, handling trans-shipment cargo. However, big shipping lines do not prefer Indian ports as trans-shipment bases due to depth limitations and inefficiencies.

1.4 Layout of a Port

The layout of a typical major port (JNPT shown here) along with the main activity locations is given below:



1.5 Audit Objectives

The performance audit of major port trusts was conducted to assess whether

- marine services were delivered in an efficient and effective manner.
- cargo handling services were efficient, effective and economical.
- efficient port connectivity and storage infrastructure were available vis-à-vis the volume of business and future plans.
- performance benchmarks set by the Ministry induced improvements in operational efficiency and were reported and monitored correctly.
- > capacity augmentation schemes taken up under the National Maritime Development Programme were implemented in an efficient and effective manner.

1.6 Scope

The performance audit covers the 11 major ports which function as autonomous bodies under the Ministry. The corporatised Ennore port has been kept out of the purview of this audit. The report covers performance issues relating to the period from 2004 to 2009. Matters relating to tariff fixation, financial management and estate management have not been included.

1.7 Audit Criteria

The following audit criteria were used in the preparation of the performance report:

- > Operational targets specified by the Ministry in their annual MOUs³ with ports
- > Targeted capacity additions and time schedules for schemes under NMDP
- > Global efficiency benchmarks for handling major categories of cargo
- Depth targets set by ports in dredging contracts
- > Best practices at select terminals and ports in India

1.8 Audit Methodology

The performance audit commenced with entry conferences with the Managements of all the major ports where the audit objectives and scope were explained and the audit criteria were agreed upon. The concerns of the users of each port were identified through surveys. During the field work, operational data was collected and audit memoranda were issued. Two months, viz.

³Every year, the Ministry enters into Memoranda of Understanding with ports, to fix operational and financial targets.

July and December 2007 were selected for detailed test-checking of vessel-related data. The audit teams also conducted physical inspections of port facilities. Observations relating to each port were issued separately. Replies were received from the Managements of nine ports⁴ and have been suitably incorporated in the report. The draft report was issued to the Ministry and an exit conference was held in June 2009. The replies of the Ministry were received in August 2009 and have also been suitably incorporated in the report.

1.9 Acknowledgement

We thank the Managements of the major ports and the Ministry for extending their cooperation and support during the course of this audit.

⁴Cochin, Chennai, Kandla, Kolkata, Mormugao, Mumbai, New Mangalore, Tuticorin and Visakhapatnam.