Developing Greenfield Port Projects in India

Ports Asia 2005

Infrastructure Leasing & Financial Services

Singapore

June 14, 2005

Section A:
Infrastructure Leasing & Financial Services Limited

Genesis

Incorporated in 1987 to "***to facilitate the development of Public Infrastructure on a commercial format and provide a wide range of financial services***"

The Shareholders

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CCF

भारतीय स्टेट बैंक
State Bank of India

IFC
International Finance Corporation

Central Bank of India

GIC

HDFC
HOUSING DEVELOPMENT FINANCE CORPORATION LTD

ORIX

The IL&FS Group Infrastructure Experience

- Active in creating and developing frameworks to enable commercialisation through the “Public Private Partnership” model
- Advisor to Central and State Governments
- Significant experience and expertise in the areas of Project Development, Project Structuring, Project Financing, Project Monitoring and Construction Administration, Operations etc.
- Fund Management
  - AIG Infrastructure Fund
  - World Bank
  - Asian Development Bank
  - Other Development Funds
- Infrastructure development related activities have expanded horizontally across sectors, and vertically in specialisation

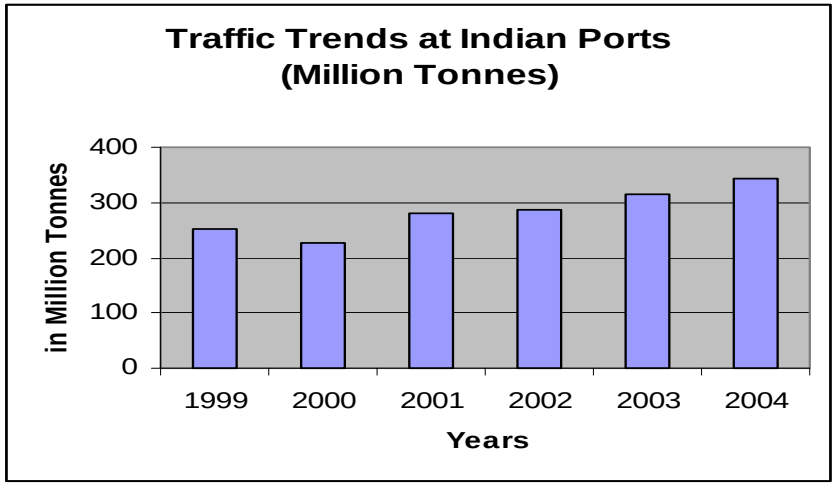
Select IL&FS Infrastructure Initiatives

- **Road Sector**
  - The Rao Pitampur Road Project
  - The Delhi NOIDA Toll Bridge
  - The Vadodara Halol Toll Road
  - The Ahmedabad Mehsana Toll Road
  - The East Coast Road
  - The North Karnataka Expressway
  - The Thiruvanathapuram City Roads Project
  - The Westen Gujarat Expressway
- **Water Sector**
  - The Tirupur Area Development Project
  - The Visakhapatnam Industrial Water Supply Project
  - The Dewas Industrial Water Supply Project
  - The Sangli Miraj Kupwad Municipal Corporation Project
- **Airport Sector**
  - The Bangalore International Airport Project
- **Port Sector**
  - The Rewas-Aware Port Project
  - The Dighi Port Project
  - The Gangavaram Port Project
  - The Vizhinjam Port Project
- **SEZs:**
  - The Andhra Pradesh SEZ
  - The Maha Mumbai SEZ
  - The Navi Mumbai SEZ
- **Area Development and Related Sectors**
  - The Integrated Area Development Project Rajasthan
  - The International Convention Centre, Andhra Pradesh
  - Development of Heritage Sites in Rajasthan

Section B:
Ports Sector in India

Introduction

- India has 12 Major Ports and a large number of Minor Ports on a coastline of over 6000 km
- Ports account for 95% foreign trade in terms of volume and 75% in terms of value
- The Major Ports handled over 380 million tons (MT) in 2004-05, a growth of 11.3% over last year constituting about 75% of the total port traffic
- The overall port traffic is expected to reach 900 million MT by 2011-12

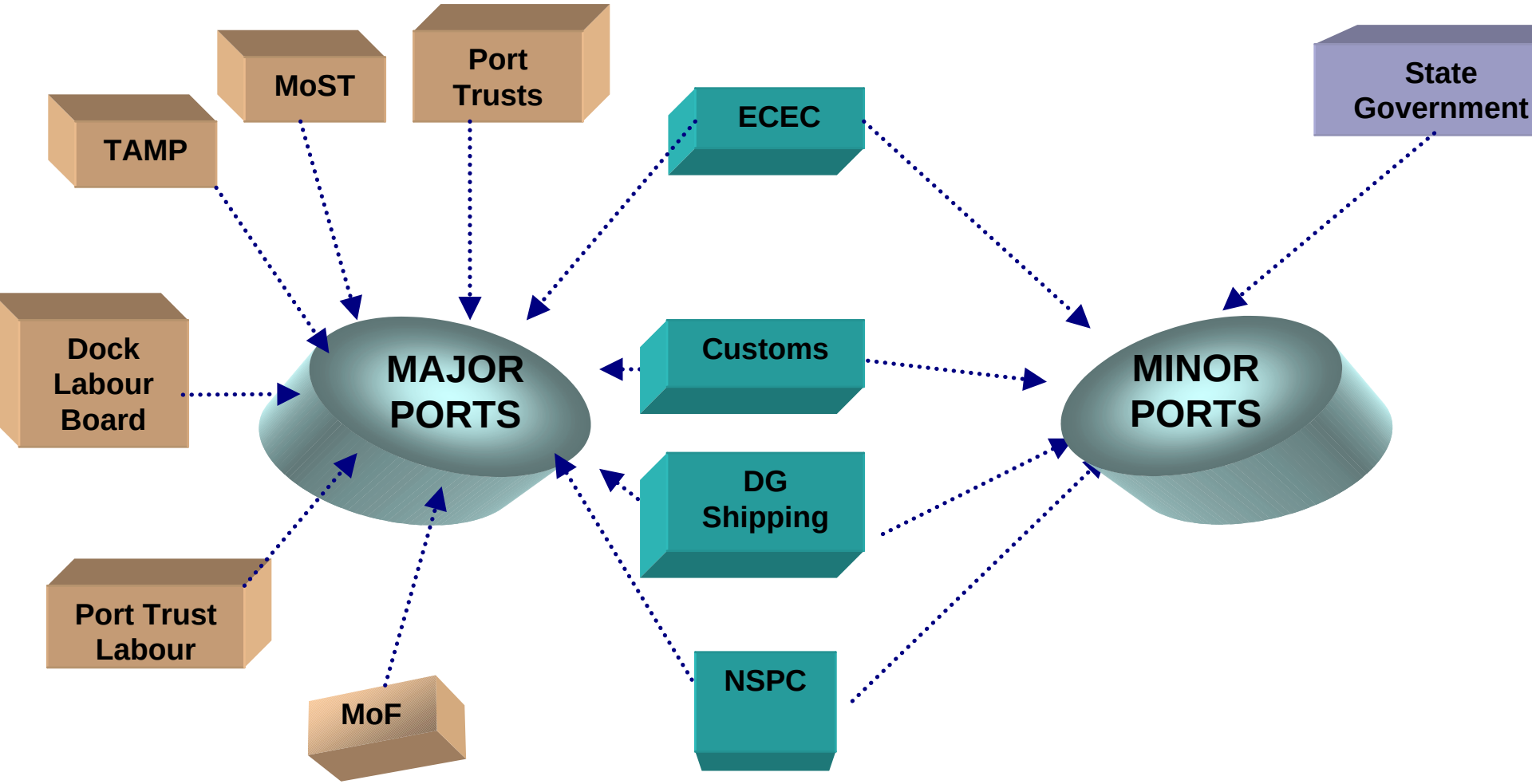


Major and Minor Ports

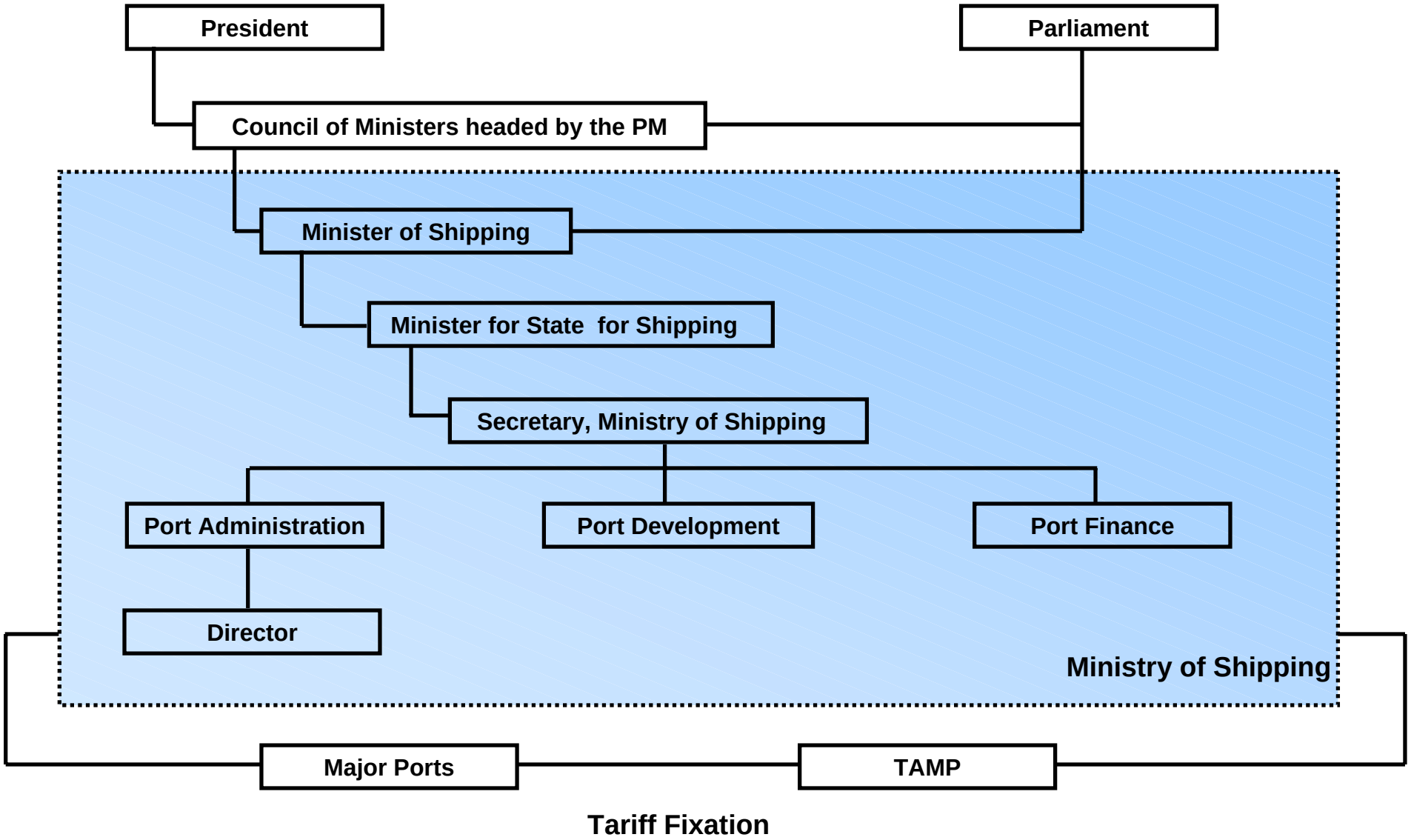
- **Major ports**
  - The Indian Ports Act, 1908 and the Major Port Trusts Act, 1963 govern the Major Ports
  - Administered by the Central Government
  - Tariff Authority for Major Ports (TAMP) regulates the tariff at Major Ports
  - The Major Ports are Chennai, Cochin, Ennore, Jawaharlal Nehru, Kandla, Kolkata, Mormugao, Mumbai, New Mangalore, Paradip, Tuticorin and Visakhapatnam

- **Minor Ports**
  - The Indian Ports Act, 1908 govern the Minor Ports
  - Administered by the State Governments
  - Minor Ports are not governed by TAMP – this gives them a pricing advantage
  - The Minor Ports under development are located in Gujarat, Maharashtra, Kerala, Tamil Nadu, Andhra Pradesh and Orissa

Institutional Framework



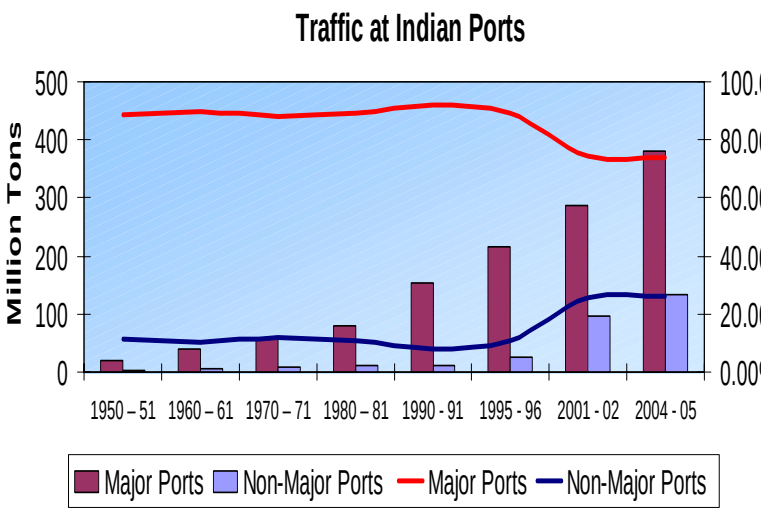
Institutional Structure for the Major Ports Sector in India



Growth in Traffic

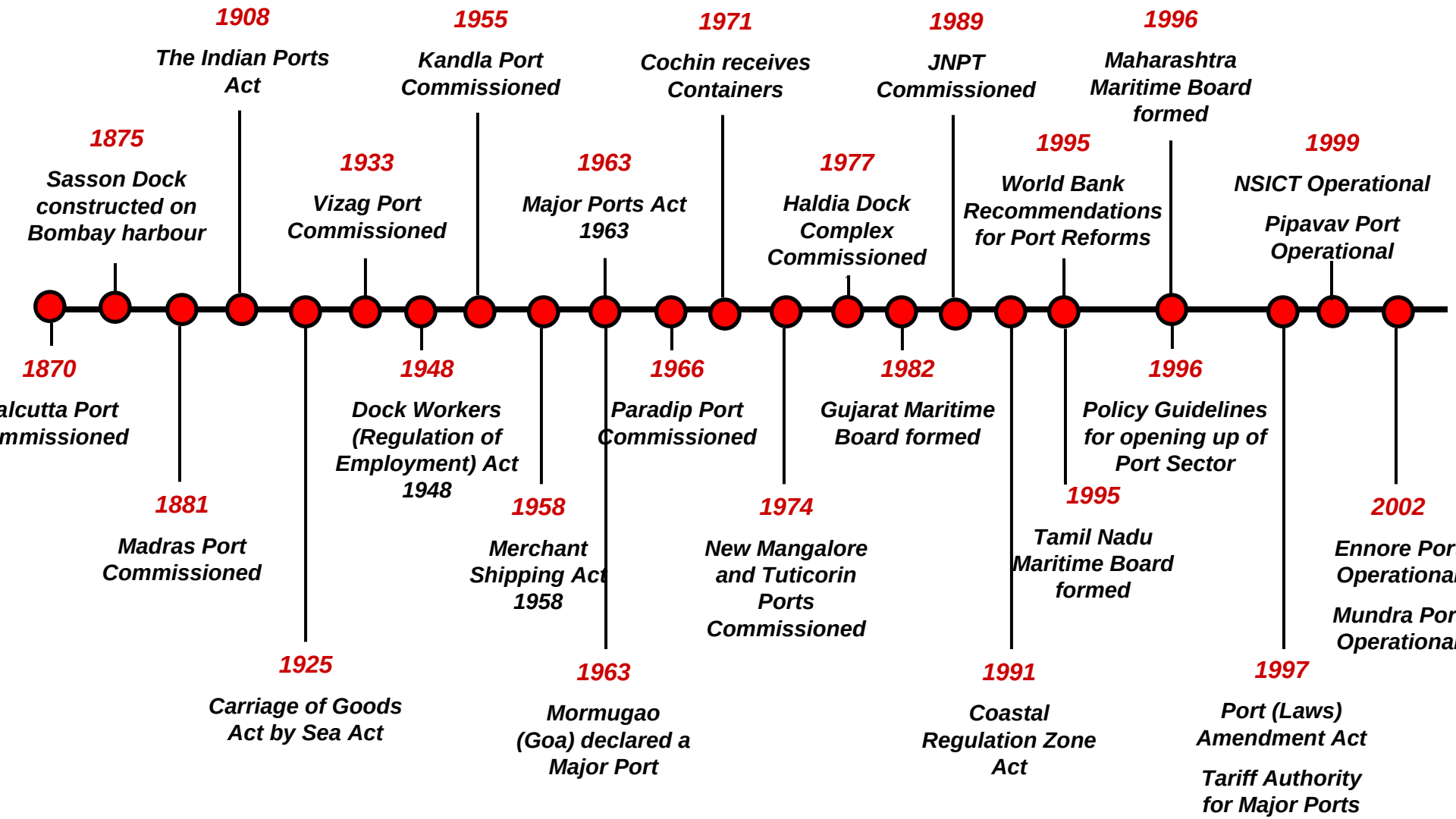
- Traffic handled by Indian Ports has increased at over 8.75% CAGR in the last decade
- Traffic at Major Ports has increased at over 6.5% CAGR over the last decade. This is due to:
  - Increased efficiency at Ports
  - New facilities developed at the Ports by the Public and the Private Sector
- However, the Major Ports are constrained due to infrastructure bottlenecks and connectivity issues, thereby hindering their growth
- The traffic at Minor Ports has increased at over 20% CAGR in the same period. This is due to:
  - Development of new facilities and Ports by the Private Sector and related efficiencies
  - Development of rail and road connectivity to the ports by the respective state governments and the Private Sector

	Major Ports	Non-Major Ports	Total
1950 – 51	20.01	2.50	22.51
1960 – 61	39.63	4.40	44.03
1970 – 71	58.14	7.90	66.04
1980 – 81	80.51	10.00	90.51
1990 – 91	152.85	12.78	165.63
1995 – 96	215.34	25.71	241.05
2001 – 02	287.59	98.00	385.59
2004 - 05	381.04	133.80	514.84



Section C:
Private Sector Participatio

Milestones in the Indian Ports Sector

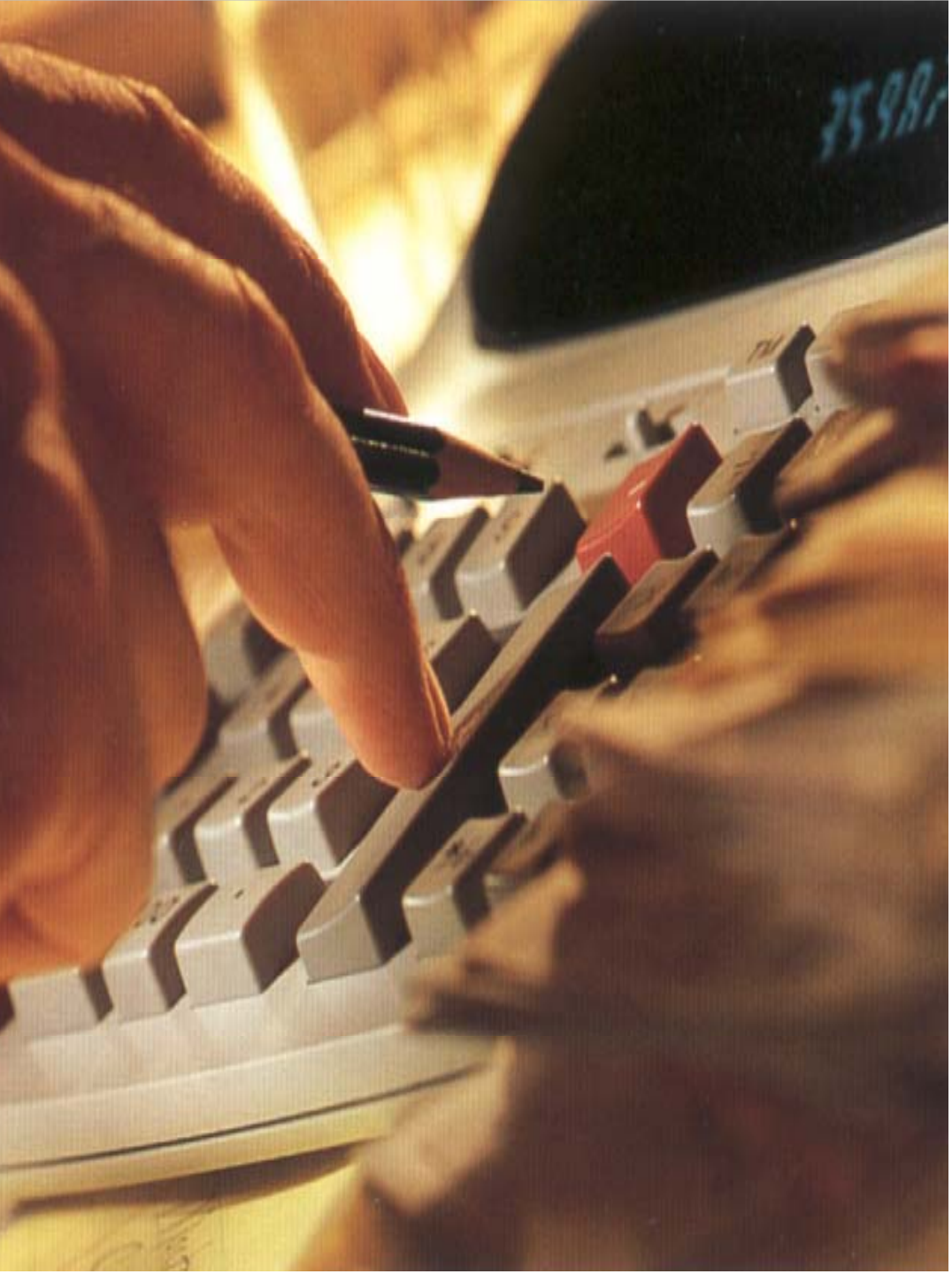


Introduction

- The multiplicity of activities in the Port Sector makes privatisation more complex than most other core sectors
- The most commonly adopted approach has been the unbundling of various assets and operations of a port, and privatising each of them separately. This includes:
  - Leasing out existing berth facilities, land for warehousing and storage, container freight stations, tank farms and land for dry docking/ship repair
  - Development of new Container and Bulk terminals on Build, Own, Transfer (BOT) formats
- Privatisation initially took off with a spate of captive port facilities being offered for development and operation to Private Sector Participants in the Minor Ports of Gujarat
- The privatisation process gained momentum after the success of the container terminal at JNPT, being privatised under Build-Operate-Transfer basis (BOT) in 1999
- Maharashtra was amongst the first States in the country to offer concessions to the Private Sector for development of ports. However, the initiative was not successful in the first phase due to:
  - Inadequate Project Development
  - Environmental Issues
- Subsequently, Memorandums of Understanding (MoUs) for the development of Rewas and Dighi Ports were executed

Policy Initiatives

- Foreign Direct Investment (FDI) of up to 51% is allowed on an automatic basis in support services like the operation and maintenance of piers and loading and discharging vessels
- Up to 100% FDI under the automatic route is permitted in projects for vehicular tunnels, ports and harbours
- A 10-year Tax Holiday may be availed of in a block of 15 years for the development of a port under Section 80 IA of the Income Tax Act, 1961
- The Build Operate Transfer (BOT) model shall be used for private sector participation with the assets reverting back to the port after the concession period. The tendering process for BOT port projects shall be open and transparent
- An independent Tariff Authority for Major Ports (TAMP) has been set up to fix and revise ceiling tariffs. The Minor Ports are governed by the respective State Governments
- Major Ports have been permitted to form Joint Ventures with Foreign Ports, Minor Ports and other companies to attract new technology, better management practices, and implementation of development schemes and creation of optimal port infrastructure
- Ports have been allowed to lease out existing berth facilities, land for warehousing and storage, container freight stations, tank farms and land and existing for dry docking/facilities/ship repair
- Private Sector Participants can develop Greenfield Projects – but only in the state sector (Minor Ports)



Section D:
Greenfield Opportunities

Greenfield Opportunities

- The Major Ports do not offer any Greenfield opportunities – privatization is limited to the development of additional infrastructure facilities at existing ports on Build, Own, Operate (BOT) formats
- Several Maritime states have formed Maritime Boards for the development of Minor Ports in their respective states
- Salient Features of the Policy of the State Maritime Boards:
  - Government land will be given on lease. The concession period will be 30 – 50 years
  - 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
  - Back up infrastructure of the port will be provided by the Government
  - Development will be on BOST, BOMST, BOOT, BOOST or BOT basis varying from state to state
  - The company responsible for developing and running the port will have complete freedom in fixing tariffs for all services
  - The Government shall collect a percentage of the revenue earned by the Port Company

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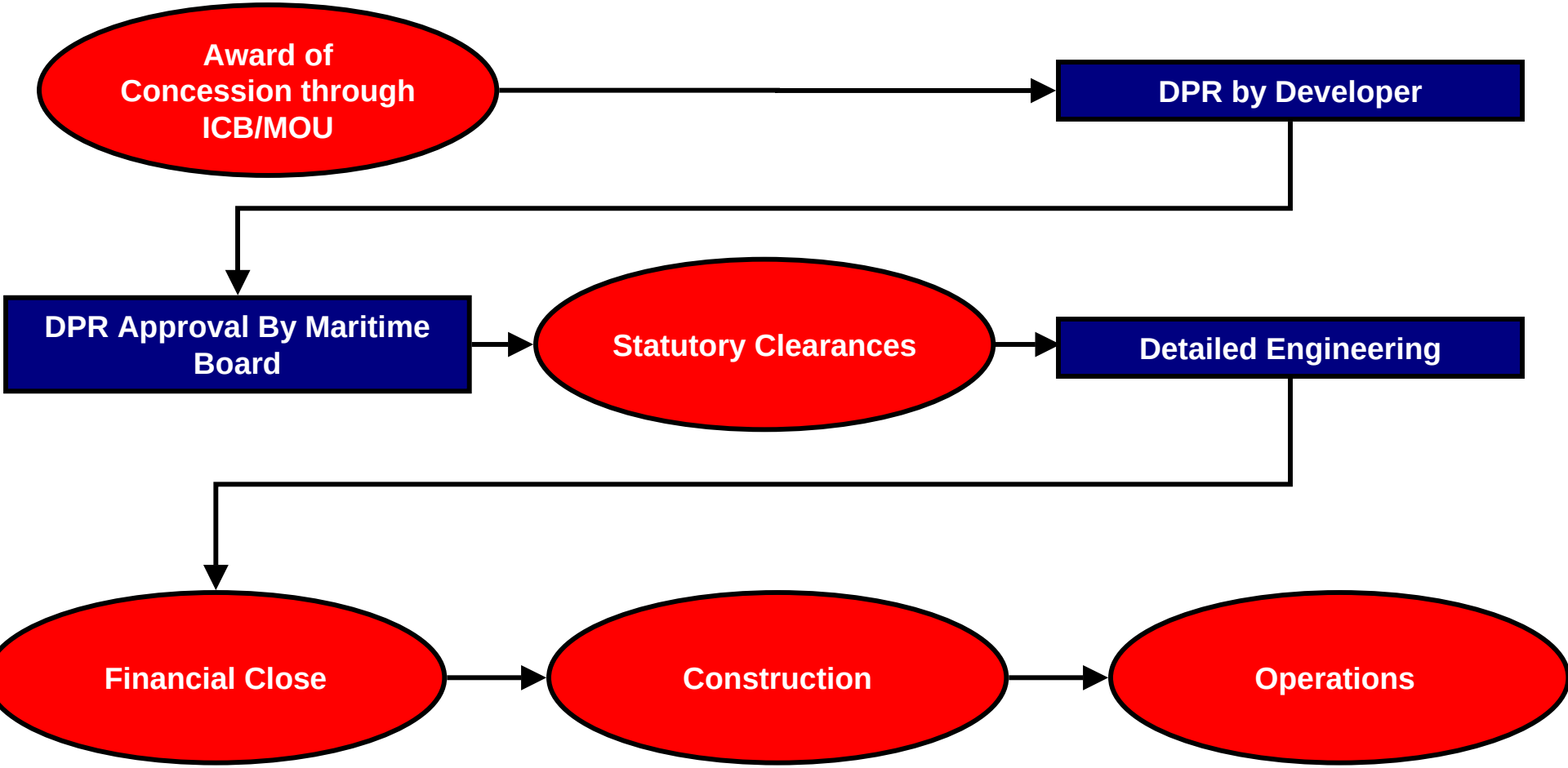
- The role of the Government will be limited only to areas where it is necessary and appropriate under any statute, national interest/security, etc

- While the State Governments have taken several initiatives for the development of Greenfield ports, the process is still cumbersome due to numerous stakeholders
- Amongst the Private Sector Greenfield ports, only the Mundra and the Pipavav Ports in the progressive state of Gujarat have been implemented successfully
- Gangavaram Port is currently under development

Implementation Process



Issues Relating to the Concession Agreement

- Each Nodal Agency has developed its own Concession Agreement – there is no “Model Concession Agreement”
- These Concession Agreements are not synchronous with the developments in infrastructure financing
- The respective State Maritime Boards are now consulting legal consuls to make necessary changes to the Concession Agreements that adhere closely with the requirement of the lenders

Development and Approval of the Detailed Project Report (DPR)

- Traffic Study
- Demand Assessment
- Engineering Studies
  - Geotechnical Studies
  - Geophysical Studies
  - Siltation Studies
  - Hydrological Studies
- Project Scoping
  - Capacity
  - Facility Layout and Design
  - Performance Standards
- Financial Analysis
  - Project Cost Estimates
  - Profitability Projections
- Upon completion, the Concessioning Authority reviews and approves the DPR
- Estimated time frame: 6 – 8 months

Port Connectivity

- The poor state of infrastructure like road and rail links has hindered the development of the ports sector over the years, especially minor ports
- There is an urgent need for better port connectivity infrastructure. This will also serve to reduce the congestion levels at many port
- Rail Connectivity
  - The Ministry of Railways has launched the Rs. 150 billion (USD 3.75 billion) National Rail Vikas Yojana (NRVY) to strengthen the Golden Quadrilateral and to improve Port Connectivity
  - Rail Vikas Nigam Limited (RVNL) is exploring various options to augment rail infrastructure. This includes connectivity between Ports and ICDs
  - Indian Railways has entered into a joint venture with Pipavav Port to ensure connectivity to the northern hinterland
  - However, the Indian Railways is a government owned monopoly – results in delays in approvals and implementation
- Road Connectivity
  - The Rs. 14 billion National Highways Development Program (NHDP) includes a 356 km of Port Connectivity Project
  - Many State Governments undertake to develop/partly fund the port connectivity/improvement projects

Required Clearances and Approvals

- Permissions and Clearances from the State Government:
  - **Land and Waterfront Issues**
    - Change in Land Use Pattern
      - The Land Use Pattern is decided by the Local Planning Authority(s) in the Development Plan that is reviewed once every 20 years
      - The Process
        - An application has to be made to the Planning Authority
        - If the Land is already reserved for another purpose, release through No Objection Certificate (NOC) has to be obtained from the concerned entity
        - The Planning Authority issues Notice inviting objections to the proposed change within the given time frame
        - After weighing the pros and cons of the objections, the Planning Authority may approve the change in Land Use Pattern
      - In several cases, the proposed port area may fall under the jurisdiction of multiple Planning Authorities, thus compounding the issue
      - Estimated time frame: 4 – 12 Months

- Notification and Acquisition of Land for the Port
  - The Process:
    - Application containing the details of Land required for the Port has to be made to the Concessioning Authority
    - The Concessioning Authority refers the matter to the Revenue Department of the State
    - The Revenue Department appoints the Acquisition Agency
    - The Acquisition Agency issues notification for Land Acquisition to individual land owners
    - Pricing and Resettlement Negotiations
    - Payment, Land Acquisition and hand over of the land to the Port Authority
  - Estimated time frames: 12 months – 36 months
- Declaration of Port Limits
  - The Process:
    - The existing Major Ports have extremely large Port Limits
    - If a Greenfield port is proposed in the vicinity, NOC has to sought from the Major Port Trust for relinquishing claim on a part of the Port Limit
    - The Port Trusts are reluctant to give up the Port Limits
  - Estimated time frame: 1 month – 6 months

- Notification for Navigational Channel
  - The Process
    - The existing Major Ports hold jurisdiction over major Navigational Channels
    - If a Greenfield port is proposed in the vicinity, NOC has to sought from the Major Port Trust for sharing/relinquishing claim on a part of the navigational channel
    - The Port Trusts are reluctant to give up their claim. Ministry of Shipping has to be approached for resolving the issue
  - Estimated time frames: 6 months – 12 months

- **Environmental Clearances**
  - Rapid Social & Environmental Impact Assessment (Rapid ESIA)
    - Rapid ESIA is conducted to determine the broad impact of the Project on the Environment and the population in the vicinity
    - Estimated time frame: 3 months

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- Public Hearing
  - The findings of the Rapid ESIA is presented to the Local Planning Authority and to the Public – this includes environmental and social groups and other interested stakeholders
  - The Process:
    - The Local Planning Authority calls for Public Hearing to hear objections and explain the Project
    - Objections are considered and the scope of the Project and the R&R packages are suitably altered
  - Estimated time frames: 1 month – 3 months
- "Consent to Establish" from the State Pollution Control Board (SPCB)
  - Based on the ESIA and the Public Hearing, the SPCB may accord its approval to the Port Project with suitable alterations to the Project
  - Estimated time frame: 2 – 4 months

- Comprehensive Social & Environmental Impact Assessment (Comprehensive ESIA)
  - The objective of ESIA is to:
    - Determine environmental compatibility of the project
    - Evaluate and select the best project alternative from the options available
    - Identify and evaluate the significant environmental impacts of the project
    - Incorporate environmental management plans and monitoring mechanisms
    - Assess the environmental costs and benefits of the project to the community
  - Resettlement and Rehabilitation (R&R) Management Plan
    - Based on the ESIA, Public Hearing and the outcome of Pricing and Resettlement negotiations, a comprehensive R&R Management Plan is developed
  - Environmental Management Plan (EMP)
    - Based on the ESIA, an EMP is developed
  - Coastal Zone Management Plan (CZMP)
    - CZMP is developed to mitigate the risk to Aquatic Structures and Marine Life
    - Identification of HT/LT lines to use the Water Front
    - Approval has to be obtained for inclusion of the Port in the Coastal Zone Plan

- Risk Assessment. This involves:
  - Determination of vessel traffic intensity
  - Study of characteristics of hazardous substances handled by the port
  - Identification of failure scenarios typical to the port
  - Frequency and probability estimation of collision, grounding, pipeline or flange joint failures etc.
  - Consequence analysis of release of hazardous substances
  - Quantification of risk
- Disaster Management Plan. This involves the development of Contingency plans backed up by:
  - Adequate and well-maintained equipment
  - Detailed procedures
  - Necessary supplies of products for treatment
  - Personnel trained to deal with spills are essential to ensure an effective response
- Estimated time frame: 12 – 18 months

- Permissions and Clearances from the Central Government:
  - Environmental Clearance (EC) from Ministry of Environment and Forests (MoEF)
    - Upon all clearances at the State Level, the State Government recommends the application for Environmental Clearance to MoEF, Government of India
    - Upon discussions and further studies, MoEF may grant the Project an Environmental Clearance with suitable modifications to the Project Scope
    - Once the EC is obtained, construction can commence with the permission of the Concessioning Authority
    - Estimated time frame: 2 –3 months after submission
  - Customs Clearances
    - Upon the completion of construction, the Port has to be declared as a “Land and Shipping Place” by the Customs Department, Government of India
    - The Concessioning Authority after satisfying itself with the construction, recommends to the Central Government to declare the Port as a “Land and Shipping Place”
    - Estimated time frame: 1 –2 months

Financial Close

- Lending from Indian Financial Institutions (FIs) and commercial banks is gathering momentum
- In the initial years of port reforms, guarantees were sought by Financial Institutions (FIs) because of lack of track record on part of Indian private port operators and limited experience of Indian FIs /Banks in appraising and financing port projects
- However, now some port projects have been funded by project financing. The key ones include:
  - Gujarat Pipavav Port Limited, Pipavav (IDBI-led consortium)
  - Gujarat Chemical Port Terminal Limited, Dahej (ICICI-led consortium)
- With implementation of number of port projects by the private sector, and experience of FIs in financing such projects, interest rates have been relaxed and the loan tenures have been increased
- It takes 3 – 5 months to achieve financial close for large port projects

Summary

DPR Preparation and Approval	:	6 - 8 months
Road Connectivity Studies	:	2 – 4 months
Rail Connectivity Studies	:	2 – 4 months
Statutory Clearances and Approvals	:	12 – 36 months
Detailed Engineering	:	4 – 6 months
Financial Close	:	3 – 5 months

The Development Process takes 24 – 40 months and requires an Investment of USD 5 – 15 million

Section E:
Successful Greenfield Por
Projects

The Pipavav Port

- In 1995, Gujarat Maritime Board (GMB) declared a comprehensive port policy for the development of Minor ports in the state and identified 10 greenfield sites for development as direct berthing, deep water ports
- In 1997, a Build, Own, Operate and Transfer (BOOT) policy was announced to attract Private Sector Participation the Ports sector; Pipavav became the first Private Sector Port
- APM Terminals is the Operator and the largest shareholder in the port

- Under Phase-I, three dry cargo berths, capable of handling containers and bulk cargo on single length jetty of 725 meters and one LPG/Liquid cargo berth have been constructed
- The operations at the dry cargo berth began in November 1996 and the liquid cargo berth was commissioned in March 1999
- The Port has handled more than 10.5 million tons of cargo till FY 05; more than Rs. 7 billion has been invested in the development of the Port

The Nhava Sheva International Container Terminal

- In July 1997, Jawaharlal Nehru Port Trust (JNPT) and P&O Ports, Australia executed a BOT agreement for a period of 30 years for the development of a 600 m quay length two-berth container terminal
- P&O completed the Rs. 9 billion (USD 225 million) project ahead of the schedule and commenced operations in April 1999; the new terminal was named Nhava Sheva International Container Terminal (NSICT)

- Expected to handle 175,000 twenty feet equivalent units (TEUs) of containers, NSICT handled 343,187 TEUs of contianers in the first year of operations; it handled 905,564 TEUs in 2004-05
- NSICT is suffering from road and rail connectivity bottlenecks outside the Port

The Mundra Port

- The Mundra Port is being developed by Gujarat Adani Port (GAPL), a joint venture company between Adani Port Limited and the Government of Gujarat
- GAPL has established the longest non-government railway line (57 km), put up at a cost of Rs 1.6 billion (USD 40 million) between Adipur and Mundra in Kutch
- The first phase was developed at an estimated expense of Rs. 15 billion (USD 375 million)
- The Agreement for the development of the Port was executed in 1996; the Port commenced commercial operations in 2002
- P&O Ports acquired the container terminal of the Mundra Port at an estimated cost of USD 200 million in 2003

The Ennore Port

- Ennore Port is the first state funded, corporatised port in India, built under the “land lord concept”, with an investment of Rs10 billion (USD 250 million)
- As a landlord port, Ennore will retain the port infrastructure and fulfill its regulatory function. The private sector will provide all other services and own port superstructure etc
- Originally conceived as a satellite port to the Chennai Port, primarily to handle thermal coal to meet the requirement of Tamil Nadu Electricity Board

- The Phase I development of Ennore Port has been completed and commercial operations began in 2001
- Currently the port is evaluating private participation in the development of seven more berths on BOT basis
- Over the next five years, it plans to add 15 berths, each costing Rs 500-700 million to handle coal, iron ore, LNG and other liquid /POL items

Section F:
Ports Under Development

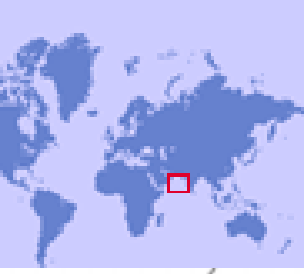
The Gangavaram Port

- Situated 15 km South of the Vizag Port, Gangavaram Port has deep water contours of more than 20 m available with in one km from shore
- The port will be developed as an All Weather, Multipurpose Deep Water Port at a cost of about Rs. 20 billion (USD 450 million)
- Andhra Pradesh Industrial Infrastructure Corporation Limited, (APIIC) and IL&FS are developing the project
- L&T Ramboll Consulting Engineers were appointed for preparing a detailed feasibility report (DPR) and identification of developer/ strategic investor

- The D.V.S. Raju-led consortium that includes Dubai Ports, Malaysian West Port and Singapore Jurong Port has secured the mandate to design, develop and operate the Port

The Vizhinjam Port

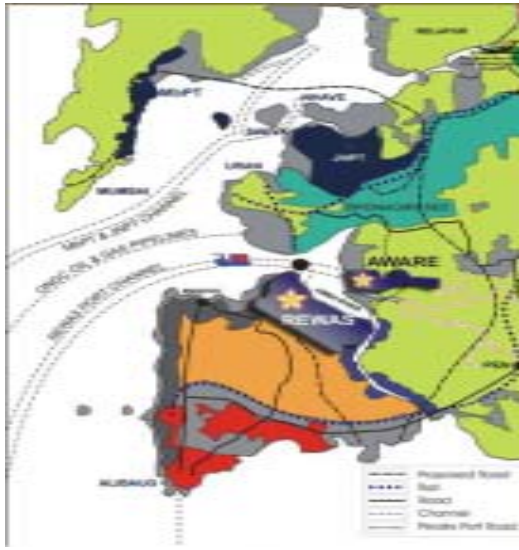
- The Rs. 45 billion (USD 1.1 billion) Vizhinjam Port is part of the Government of Kerala's plan for development of a slew of Minor Ports in the state through private participation
- The natural depth at Vizhinjam is 24 metres, and therefore does not require dredging
- The proposed port is located close to international waters and international shipping routes
- The Port is being developed as a major transshipment port to compete with the Colombo, Singapore and Dubai ports
- The development plan envisages construction of 30 berths catering to all types of cargo. Initially, the terminal will have the capacity to handle 5 million TEUs

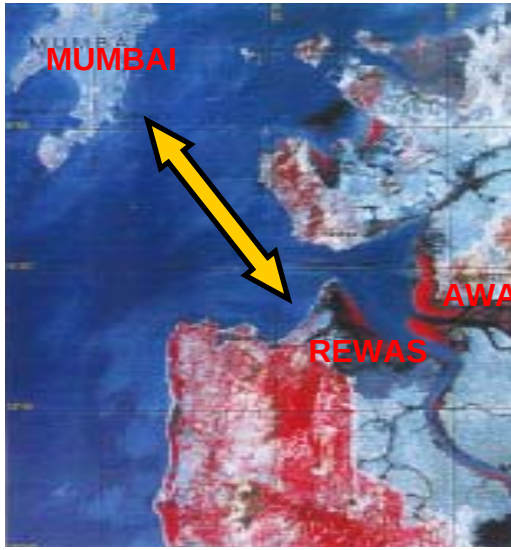


Section F:
IL&FS Port Sector Initiative

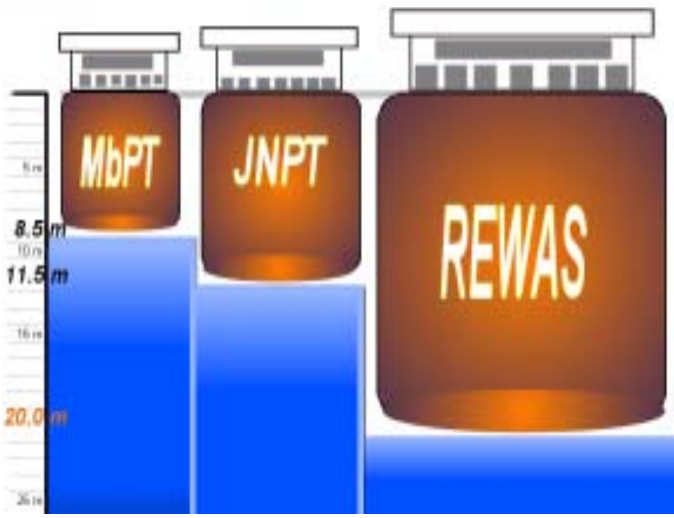
The Rewas Port

- Location
  - The Project site is located about 15 km south of the Jawaharlal Nehru Port (JNPT)
- Development Plan
  - In the first stage of development of the Rewas-Aware Port, 6 berths are envisaged:
    - 3 Container Terminals
    - 2 General Cargo Berths
    - 1 Bulk Cargo Terminal
  - Road Connectivity
    - The Port will be connected through a new 4-lane alignment to the National Highway
    - The Port will also be connected to Navi Mumbai SEZ, Maha Mumbai Integrated SEZ and JNPT
    - Rewas will be connected to Mumbai through the proposed Trans-Harbour Link
  - Rail Connectivity
    - The Port will be connected to to the nearest Railhead 24 km away





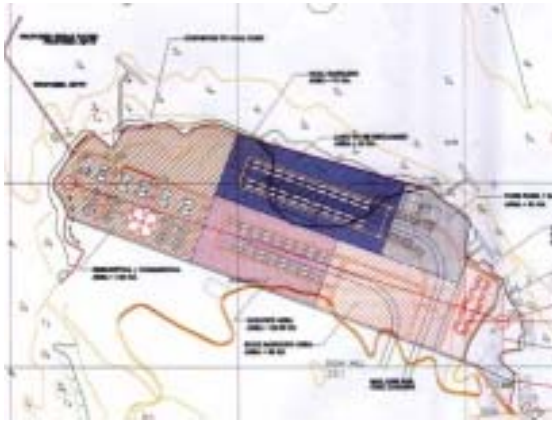
Salient Features



- An All-weather, Multi-cargo, Deep Draft (20m) Port (JNPT has 11.5m)
- A Mainline/International Hub Port (minimum Draft - 15m)
- Dock 1 itself can accommodate 14 berths
- Inter-connect ports such as MbPT, JNPT with Rewas
- Integrated with Mumbai Integrated Special Economic Zone
- Adequate Availability of land
- No requirement for Breakwaters
- Adequate backup/storage area available to Berth Operators
- Only requires soft dredging to achieve a depth of 20 metres
- Electricity and Water are easily available

Dighi Port

- Location
  - The Project site is located about 80 km south of the Jawaharlal Nehru Port
- Development Plan
  - Dighi is being developed as an “Energy Port” for Western India
  - Negotiations are currently on with large Independent Power Producers (IPPs) to source their fuel requirement from Dighi Port
  - The Port facilities will be developed on both the southern (Dighi) and the northern (Agardanda) banks
  - In the first phase, 2 berths are envisaged:
    - 1 Coal Berth
    - 1 Bulk Cargo Terminal
  - Road Connectivity
    - The Port site is connected to the National Highway through a 52 km intermediate lane State Highway. This road will be widened to a four-lane highway
  - Rail Connectivity
    - The Port will be connected the nearest Railhead 45 km away



Salient Features

- Surrounding headlands provide a natural breakwater making Dighi an all weather port with high tranquility
- Available waterfront of the port is approximately 6 km
- The Port has adequate draft for berthing for Panamax Vessels; it can be developed to accommodate larger vessels
- Flexibility to develop berths on Northern and Southern sides
- Strategically located on the main sea route on the West Coast between JNPT and Mormugao Port
- 1 km wide waterfront for free maneuvering

Participation Sought

- Port Operators
- Container Berth Operators
- Bulk Berth Operators
- Partnerships for Rail and Road Connectivity

Thank You