

# Vizhinjam Transshipment Hub

Ports Sector

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# Table of contents

## **1. Project Background**

## **2. Project Concept**

Port Location Analysis

Master Plan

Project Components

Special Economic Zone at Vizhinjam

## **3. Demand Analysis**

Indian Port Scenario

Kerala Port Scenario

Traffic Analysis

## **4. Government Regulations & Statutory Clearances**

Central & State Government Clearance

Government Guidelines

## **5. Project Structure**

Alternative Project Structures

# Project Background

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- Background

# Project Background

- Containerization of general cargo traffic has progressed steadily in the last decade, and now 70% of the total world general cargo traffic is containerized. In the year 2000, the world container trade was about 60 MTEUs (million twenty feet equivalent units) generating a port traffic of 180 MTEUs. The projected annual growth rate of global container volumes for the next 6 years is around 6.5% per annum (p.a). Container traffic to and from Asia is expected to provide a major share in this growth.( Asia's share in containerized exports is expected to rise from 46% of world total to 51% in next 10 years, similarly in import it is expected to rise from 40% to 44%) It is projected that transshipment volumes at key Asian hub ports would reach a total of 64 MTEU by the year 2011. In order to handle this traffic, Asia would require around 434 new berths. South Asian traffic especially, is expected to show a solid growth and India would play a major role in it. India would require an investment of around Rs 250 billion in building Port Infrastructure to be able to handle its traffic and meet the transshipment demand.
- In the year 2000, the Indian container trade volume was about 2.2 MTEUs generating a total port traffic of 8 MTEUs. With Indian economy growing at a sustained rate of 6% p.a, it is expected that the Indian container trade would grow at a rate of 8% p.a implying the need for a significant expansion. (Indian Container Trade is projected to be around 15 MTEUs by 2015) Indian Ports infrastructure with the annual capacity of 1.9 MTEUs is inadequate to handle even the existing demand.(the present average capacity utilization in Indian ports is around 115%) The present level of containerization in India is very low in comparison to world standards and as this picks up there would be a serious infrastructure crunch to cater to this increased demand. All of the above points to the need for development of a world class transshipment hub.

## Project Background (Contd..)

- The steady increase in container traffic discussed earlier, has pushed shipping companies towards operating larger ships. It is projected that there would be approximately 490 very large vessels (approximately 130 of these would be post panamax ships with size of 10,000 TEU or above) deployed on routes to and from Asia by the year 2006. These ships provide economies of scale due to reduction in the per unit shipping cost. This development has resulted in the establishment of selected aggregation centres along the sea routes, which act as major transshipment hubs.
- The draft restrictions at most of the Indian Ports prevent mother vessels from calling and hence creating a bottleneck to transship India bound cargo in India. (Jawaharlal Nehru Port Trust (JNPT) is the only port in the west coast, that can receive mother vessels of around 4000 TEU) Ports of Colombo, Dubai, Salalah, Port Klang & Singapore act as transshipment hubs for almost 80% of Indian bound container cargo, earning around \$ 350 million p.a. Development of a transshipment hub capable of handling big ships would help winning back the Indian cargo being handled in these ports.
- Kerala has a vast coast line of around 580 km. With a population of around 30 million, its Net State Domestic Product was Rs 625 billion for the year 1999-00.(5.22% of the Country's GDP) Historically, Kerala has attracted traders and navigators from Europe and the Middle East. Owing to its prominent location on the global trade route, Arabs from the eighth century, the Portuguese, the Dutch, the British from the sixteenth and the seventeenth centuries established trade centres in Kerala and developed ports all along the coast of the state. At present Kerala has 1 major port (at Cochin) and 17 minor ports spread across the state handling around 14 million tonnes of cargo. Capacity utilization of around 93% at Cochin Port shows the gap between demand and supply of port infrastructure in Kerala. (Cochin Port experiences serious difficulties in expansion due to depth constraints in the approach channel because of heavy siltation) Kerala's strategic location in terms of its proximity to the international sea route makes it an attractive location for a port of international standards.

## Project Background (Contd..)

- Thiruvananthapuram being the political metropolis of the state, is one of the most well connected district with good network of roads, communication facilities, international airport, inland waterway connectivity and social infrastructure. It has 78 km of coastline, which accounts for around 13% of the total state coastline. It has a Net Domestic Product of around Rs 33 billion, the highest in the state. Its huge industrial base of 1,000 registered factories, 34,000 small scale industries employing around 30,000 people is an added advantage for a port to come up in the district.
- Vizhinjam, a minor port in Thiruvananthapuram district, 2 km south of the world renowned international tourist centre, Kovalam, is an ideal location offering unlimited scope in the development of a world class port at a very low cost. (It was declared a minor port by the Government of Kerala (GoK) in the year 1977 and subsequently declared as a customs port) It is located 20 km south of Thiruvananthapuram and 68 km north of Kanayakumari. It is a natural all weather deep water port, currently handling around 26,000 tonnes of cargo p.a.(The cargo is mostly cement, clay and perishable items) Vizhinjam's natural advantage in terms of its proximity to international shipping route, availability of deep water contours at very short distance from the coast and proximity to major industries, export oriented units & availability of large quantities of placer deposits with good export potential nearby, make it an attractive location for a transshipment hub. The nearby competing ports are Tuticorin (220 km to the east) & Mangalore (610 km to the north) handling around 10 million tonnes and 17.6 million tonnes of cargo respectively.
- It is proposed to develop a transshipment hub with a initial handling capacity of 5 MTEU at Vizhinjam with the help of public private partnership. The development envisages construction of world class facilities with 30 berths catering to all kinds of cargo, bunkering facilities, necessary related infrastructure, rail & road connectivity and development of a special economic zone abutting the port.

# Project Concept

- Port Location Analysis
- Master Plan
- Project Components
- Special Economic Zone at Vizhinjam



# Port Location Analysis



	Trivandrum	Cochin	Chennai	Coimbatore	Bangalore	Mangalore	Tuticorin	Mumbai
Vizhinjam	20	230	710	420	760	610	220	1550

All Distances are in km

## Infrastructure & Connectivity

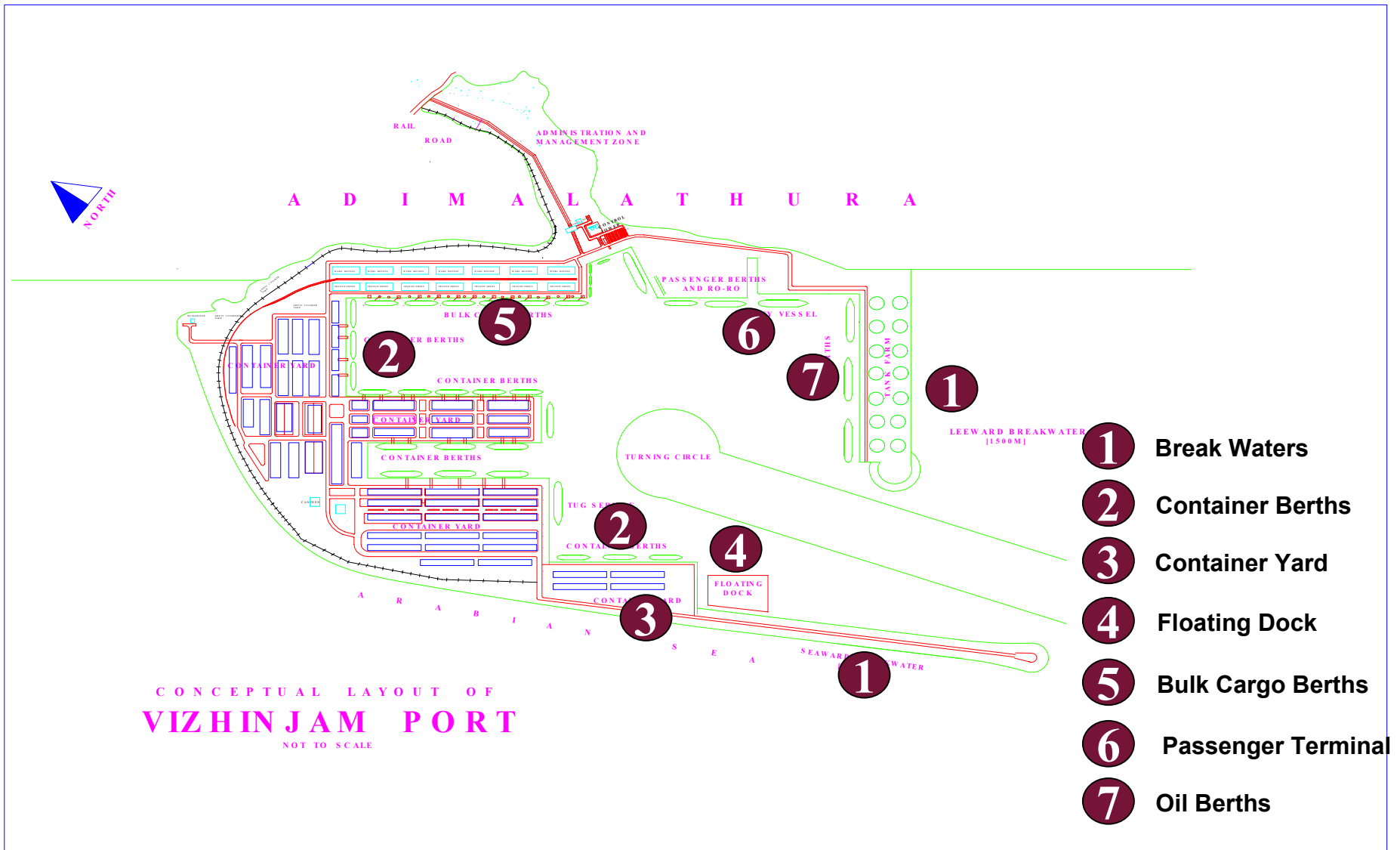
### Location Analysis:

- The site proposed is in Adimalathura, 5 km south of the existing fishing harbour at Vizhinjam.
- The table below shows the distances from Vizhinjam to major cities in India. Vizhinjam is located almost central to the entire coastline of the country, hence can meet the requirements of the coastal trade.
- Vizhinjam is situated 20 km off the international shipping route connecting Europe, Persian Gulf & Far East. Such proximity will make it a favourite port of call for most ships in the route.
- Natural Draft of 24 m within 1 nautical mile of the proposed location is a big advantage in attracting mother vessels to call at the port. (The nearby ports of other states viz., Tuticorin & Mangalore have an operational draft of only 10.1m & 15.4 m respectively. )
- Littoral Transport is the least in the area hence reducing the amount of maintenance dredging required and costs associated with it.

## Location Analysis (Contd..)

- Vast hinterland comprising of Thiruvananthapuram, Kollam, Pathnamthitta & Alappuzha districts of Kerala and neighbouring districts of Tamilnadu (approx area would be around 10,000 sq.km) provides a steady source for export cargo and import demand.
- The nearest power substation at Azhakulam (66 KV) is 2 km from the proposed site.
- Water supply can be got from an existing pond at Kasthurikulam. (Distance from the proposed site is 7 km)
- **Connectivity**
  - Trivandrum International Airport (19 km away from the proposed location) provides regular domestic and international connectivity.
  - The proposed location is 10 km away from National Highway 47, which connects the coastal cities in Kerala viz. Trivandrum, Kollam, Alappuzha, Ernakulam, Thrissur & Palakkad with Coimbatore in Tamil Nadu. The proposals of Golden Quadrangle and East coast – West Coast Express Way with its Cochin spur by National Highway Authority of India, which are under implementation would provide good connectivity to the port. The Kerala State Transport Project (costing \$336 million) aims to improve traffic flow and road safety on Kerala State's primary road network. This will also ensure smooth connectivity from the port to the other parts of the country.
  - The proposed location is 10 km from the National Railway Network, connecting Trivandrum to all the major cities in India. (Nearest station is at Balarampuram (11 km from the proposed location), which lies in the Thiruvananthapuram Kanyakumari route)
  - Inland Waterways Authority of India has plans to extend the National Waterway No III also called as (West Coast Canal extending from Kollam to Kottapuram) to Kovalam in the South and Kassaragod in the North. This extension would provide the necessary inland water connectivity to reach the hinterland of the port.
- **Land Availability:** 150 Acres of backup land can easily be acquired for the proposed development. 4-5 m of land reclamation can be done for additional land requirements.

# Master Plan for Vizhinjam Port



Map is not to scale and is for the purpose of illustration only

# Project Components

- Development of a mega transshipment hub at Vizhinjam with a capacity of around 5 MTEUs, incorporating state of the art technology catering to all types of vessels including Super Post Panamax Vessels & Mega Container Carriers. The master plan shown in the previous section gives a indicative layout of the proposed facilities and infrastructure.
- **The facilities envisaged include:**
  - A total of 30 berths including:
    - **Container Terminals**
    - **POL facilities**
    - **General Cargo**
    - **Passenger Terminal:** Kerala is a famous tourism destination & many cruise vessels call at Vizhinjam. A proper berthing facility with passenger terminal will increase the frequency of visits by these cruise ships.
  - **Full Fledged Bunkering facilities:** The proximity of the location to the International Shipping route would make it attractive for mother vessels to refuel in this hub.
  - **Other related infrastructure facilities like:**
    - **Container Stackyard:** Efficient port planning to ensure adequate stackyard capacity behind every berth.
    - **Container Freight Stations**
    - **Floating Crafts:** Optimum number of tugs, pilot boats and launches dependent upon the estimated number of ships calling at the port
    - **Port Buildings:** Includes construction of Administrative Office, Canteen, Gate Complex, Workshops, Port Colony etc. for administrative and operational functions
    - **Communication systems:** Usage of modern telecommunication systems using fibre optic cables. Electronic Data Interchange (EDI) system to facilitate container data, stacking status, container history, container schedule, monthly vessel schedule, container receipt & delivery enquiries.

\* The project plan can be modified according to the preferences of the investor in mutual agreement with the Department of Ports,GoK

# Project Components

- **Berth/Container Yard Equipments:** Selection of efficient stackyard handling system based upon the estimated transshipment traffic
- **General Cargo Storage**
- **Cold Storage:** It is expected that a huge amount of perishable products would be handled through the port.
- **Container Repair Facility**
- **Rail & Road Linkages:** Development of proper access roads to the nearest Highway Network. Rail siding to connect the port to the nearest railway line.
- **Fresh Water Supply** to calling ships
- **Training Institute** for Port management & Port related activities
- **Fumigation Service**
- **Fire Fighting Service**
- **Pollution & Oil Spill Control**
- **Supply of Ship Stores**



**Total Anticipated Investment: US \$ 500 million**

# Special Economic Zone at Vizhinjam

- To develop the hinterland of the port & take advantage of the proposed transshipment hub a Special Economic Zone (SEZ) near the port is proposed. Developing port based industries in the SEZ, would provide dedicated cargo to the proposed port and hence enhance the viability of the port.
- **SEZ:** Development of a duty free enclave, deemed to be a foreign territory for the purposes of operations, duties and tariffs. It would be designed as a self contained township with its own supply of basic utilities such as water, electricity and telecommunication.
- **Target industries include:**
  - Agro/Food Processing
  - High Tech industries such as computer chips, mobile phones, telephones etc
  - Mineral Processing
  - Manufacturing of White Goods
  - Pharmaceuticals
  - R&D Establishments
- Sufficient land can be acquired near the area for the proposed development.
- **Favourable SEZ policy by the Govt of India:**
  - **Benefits to Promoters**
    - Procure goods from the Domestic Tariff Area (DTA) without payment of duty or import specified goods at concessional rate of duty as may be notified by the Government for the development of SEZ.
    - Full freedom in allocation of developed plots to approved SEZ units on purely commercial basis.
    - Full authority to provide services like water, electricity, security, restaurants, recreation centres etc. on commercial lines.
    - Authority to develop townships within SEZ with residential areas, markets, play grounds, clubs, recreation centres etc
    - Entitlement as provided for in the Income Tax Act for infrastructure development.

# Special Economic Zone at Vizhinjam

Kerala's Attractiveness	
Indicators	Rank
Overall Composite Ranking	3
Infrastructure Penetration	5
Social Sector	2
Law & Order	1
Education, Health Expenditure	1
General Achievement	6
Affluence	3
Labour	9

Source: CII Survey, 2002



- **Benefits to units in SEZ**

- No license required for Import
  - Exemption from custom duty, excise duty on import of capital good, raw materials etc
  - Simplified custom procedure – in house custom clearance
  - 100% FDI allowed in manufacturing sector
  - No cap on foreign investment for SSI reserved items
  - Profits allowed to be repatriated fully
  - Corporate tax holiday for a specified no of years
  - Exemption for industrial licensing requirement for SSI reserved items
  - Developed plots and ready to use built up space
  - Support services within the complex
- The above table shows that Kerala is one of the most attractive destination in India taking into account the indicators with which investors make decisions regarding the desired destination for their development/expansion plans.
  - A SEZ with a port would be a synergistic alliance as experienced in China and would become one of the major industrial growth centres of Southern India.

**Total Anticipated Investment: US \$ 200 million**

# Demand Analysis

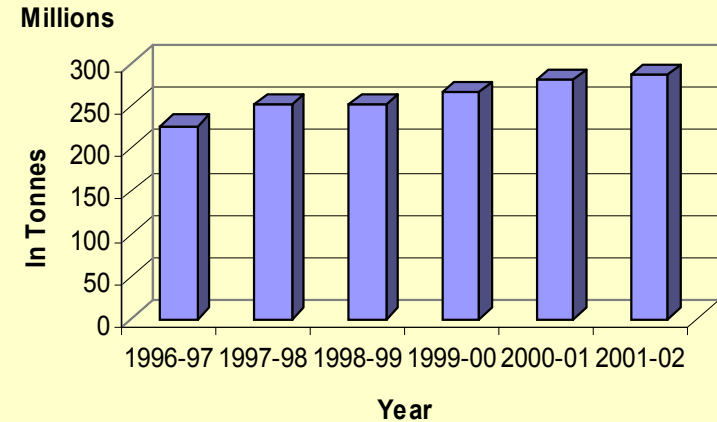
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- Indian Port Scenario
- Kerala Port Scenario
- Traffic Analysis

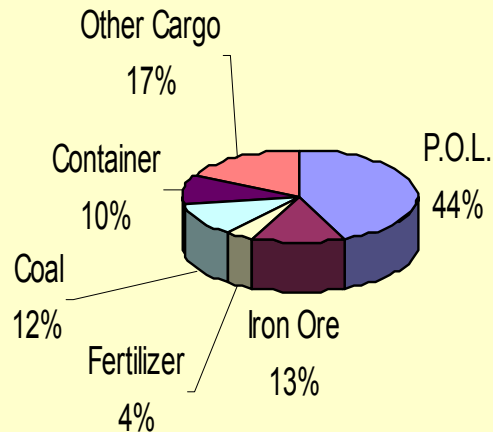
# Indian Port Scenario

- The adjacent graph shows the growth rate of total cargo handled by Major Indian Ports since 1996-97. In the year 2001-02, the total cargo handled (including Minor Ports) was around 368 million Tonnes.
- Around 15% of the total cargo handled is through the Southern Ports of New Mangalore, Cochin & Tuticorin.
- The graph below shows that only 10% of the total cargo in India is containerized. With efforts being made towards increasing containerization, it is expected that 60% of total cargo would be containerized by year 2007.

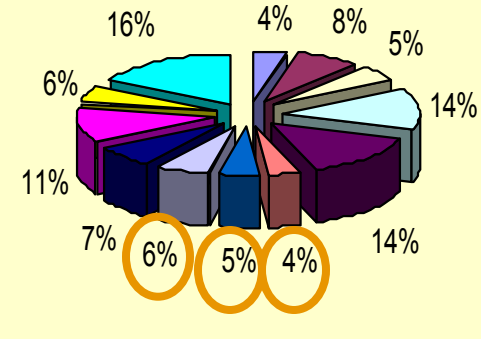
**Total Cargo Handled by Major Indian Ports**



**Distribution of Cargo by Type of Cargo**



**Distribution of Cargo across Major Ports**

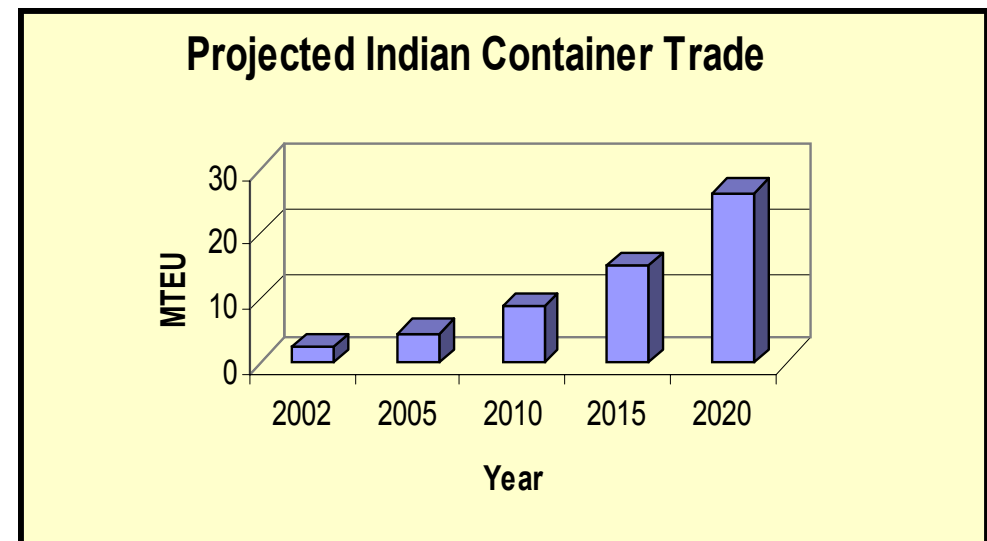
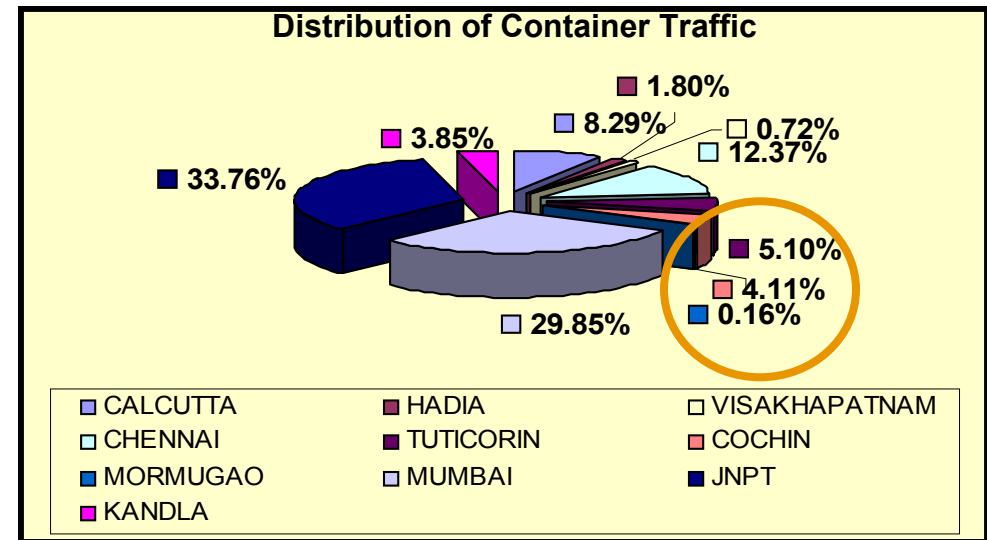


- Calcutta
- Haldia
- Paradip
- Vishakhapatnam
- Chennai
- Tuticorin
- Cochin
- New Mangalore
- Mormugao
- Mumbai
- J.N.P.T.
- Kandla

# Indian Port Scenario (Contd..)

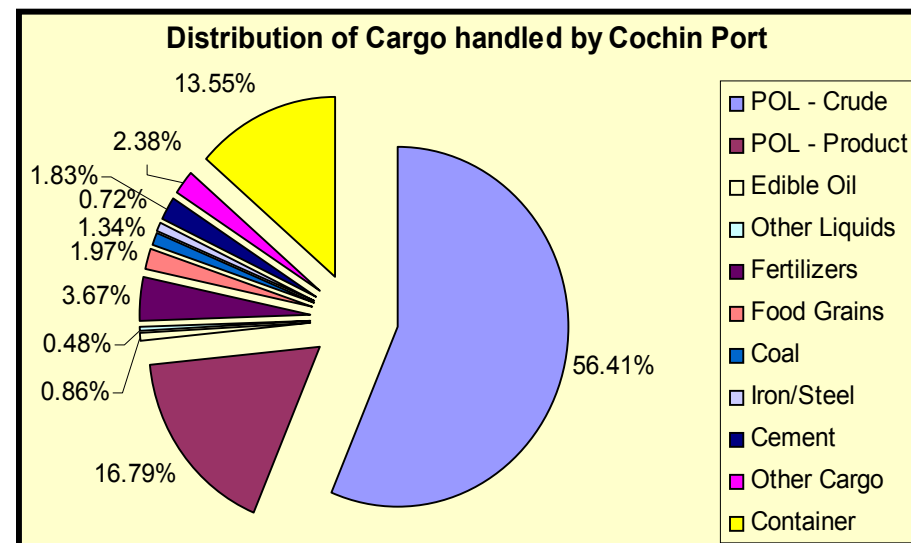
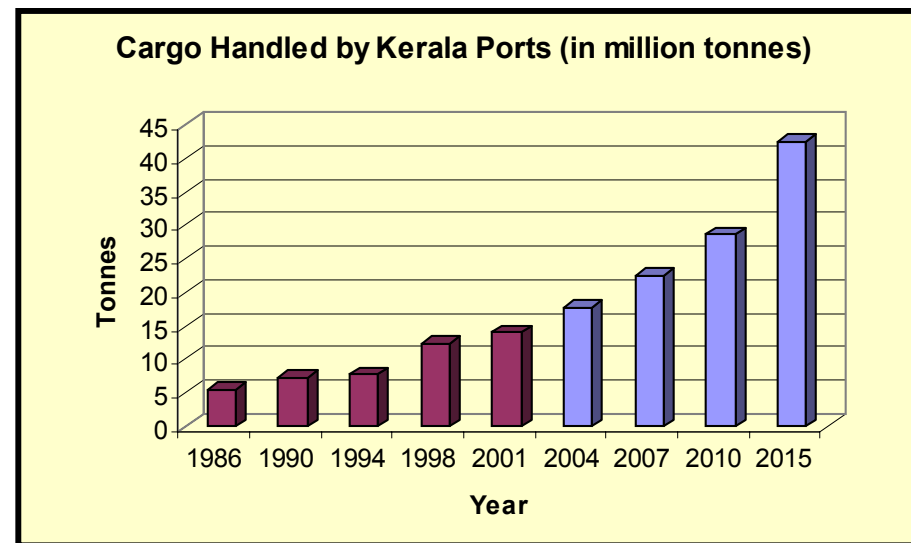
- The adjacent graph shows the distribution of container traffic across Major Ports in India. The Southern Ports viz. Cochin, Tuticorin and Mormugao handle around 10% of the total container traffic. Most of the container traffic is handled by Mumbai & JNPT Port.
- Indian container trade is expected to grow at a rate of 8 % and would reach 15 MTEUs By 2015.
- As shown below, capacity utilization for most of the Indian ports is almost 100%. This leads to delayed cargo handling with time and money loss. With the present rate of capacity addition, Indian Ports Association projects that by 2019-2020 Indian Ports would be 218% utilized.

Port	Rated Capacity (in million Tonnes)	Utilization
Kandla	39.00	97%
Mumbai	30.50	87%
Jawaharlal Nehru Port	25.00	90%
Mormugao	19.48	118%
New Mangalore	20.25	86%
Cochin	13.45	93%



# Kerala Port Scenario

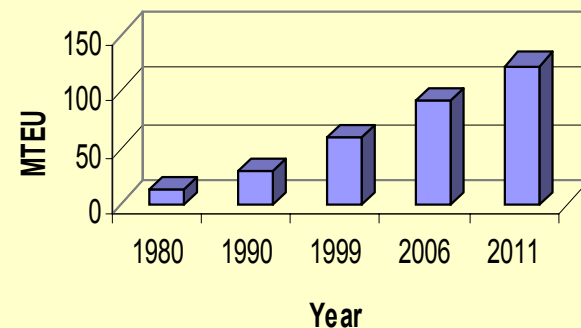
- The total cargo handled by all ports in Kerala was around 14 million tonnes in the year 2001-02. It is growing at an average rate of around 8.3% p.a. The adjacent graph shows the past traffic handled and future projected traffic for ports in Kerala. It is projected that by 2015 Ports in Kerala would handle around 40 million tonnes p.a.
- Cochin is the biggest port in Kerala and India's one of the most prominent port in the west coast. It handled around 13.5 million tonnes of cargo in the year 2001-02. The adjoining graph gives the distribution of the cargo handled across different commodities. POL Cargo comprises of most of (73 %) the cargo handled by Cochin Port.
- Government of Kerala's pro enterprise port policies discussed later coupled together with the incentives offered by Government of India such as 100% Foreign Direct Investment, 10 year – 100% tax holiday, permission of External Commercial Borrowings etc. make a private initiative in the port sector in Kerala, highly attractive.



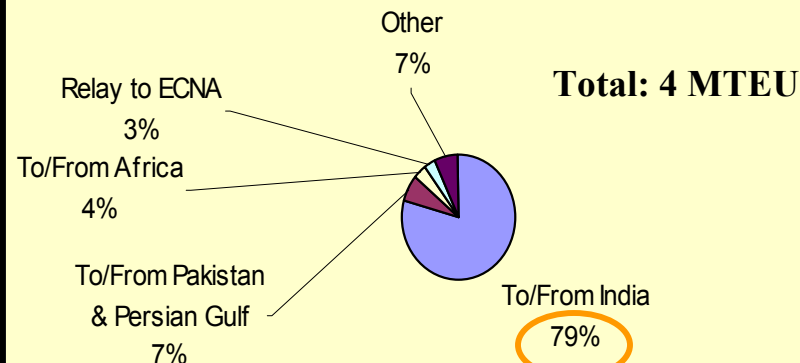
# Traffic Analysis

- The adjacent graph shows the projected world container trade market. By 2006 the world market would grow to around 85 MTEUs. Key Asian hub ports would be handling around 40 MTEUs in 2006. With such a huge growth projected from the present levels, Vizhinjam is supposed to play a key role as a major transshipment hub.
- As mentioned earlier, the present transshipment of Indian Cargo is handled in Ports of Colombo, Dubai, Salalah, Klang & Singapore . Projected future traffic scenario of these ports is discussed below, to provide an indication to the target market the hub at Vizhinjam seeks to attract.
- **Port of Colombo:**
  - Currenty Port of Colombo has a total cargo throughput of 25 million tonnes, of which containerized cargo accounts for 72% of the total cargo. Its container transshipment volume is expected to grow to 4 MTEUs by 2011. 79% of this transshipment cargo is to/from India. With the development of a transshipment hub just 190 nautical miles from it at Vizhinjam, the new port would be able to attract a major portion of India bound cargo from Colombo.

**Estimated & Forecast World Container Trade**

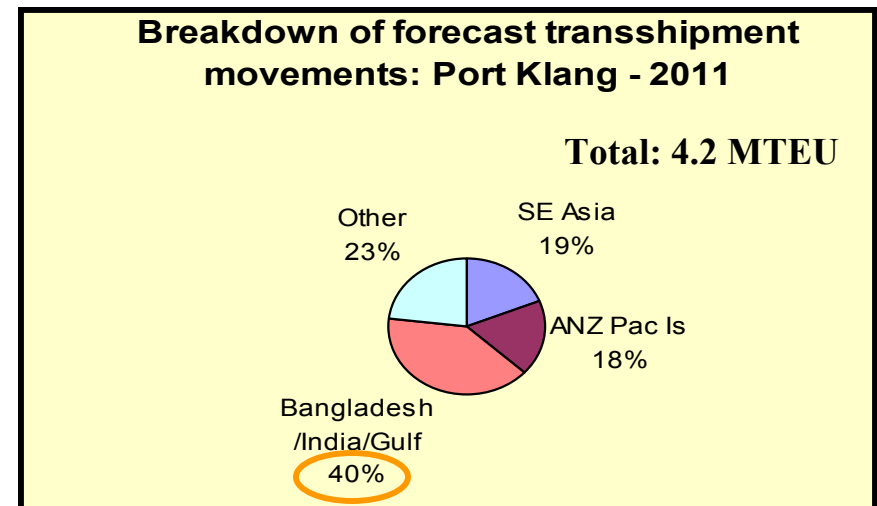
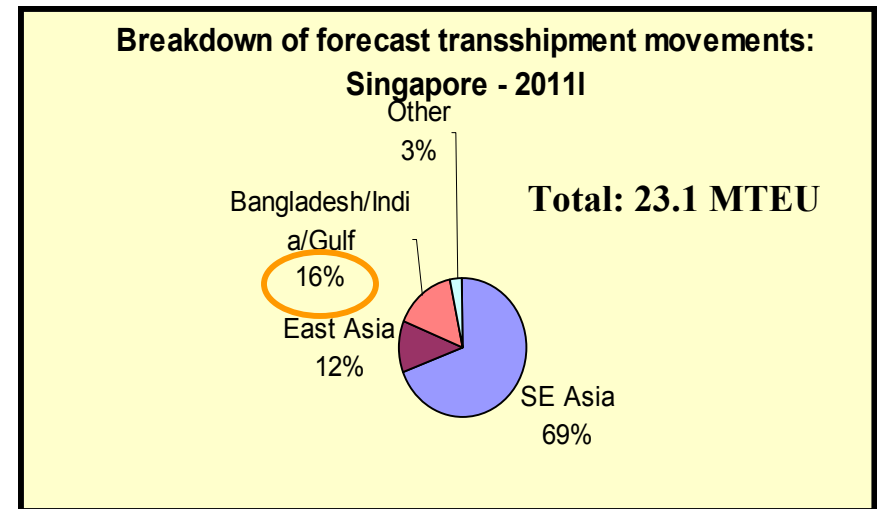


**Break Down of Forecast transshipment movement - Colombo (2011)**



## Traffic Analysis (Contd..)

- Port of Singapore:** The main transshipment hub of Asia and one of the biggest port in the world is a focal point of 400 shipping lines with links to more than 700 ports worldwide. Currently the port handles around 17 MTEUs, 80% of which is transshipment cargo. Its transshipment cargo is expected to grow upto 23.1 MTEU by 2011 & 16% of this cargo (3.5 MTEUs) is to/from Bangladesh and India.
- Port of Dubai:** Currently the Port of Dubai handles around 3.5 MTEUs of which 1.73 MTEU is transshipment cargo. Around 5-10 % of this cargo is to/from India. With the assumption that it would continue to grow at the historical average rate of 9.5%, its projected transshipment cargo by 2011 would be around 4.3 MTEUs. Hence, around 0.5 MTEU of cargo would be to/from India by 2011.
- Port Klang (Malaysia):** It is one of the fastest growing ports in South East Asia, handling around 1.4 MTEUs of transshipment cargo. It is projected that by 2011, it would handle around 4.2 MTEUs and 40% of this is cargo to/from India, Gulf Countries & Bangladesh.
- Similarly other ports like **Tanjung Pelepas** in Malaysia is expected to handle 4.5 MTEUs by 2011. 6% of the total cargo handled in the port is to/ from India & Gulf Countries.



# Government Regulations & Statutory Clearances

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- Central & State Government Clearances
- Salient Features of the Proposed Port Policy

# Central & State Government Clearances

- **Central Government Clearances**

- Clearance from Ministry of Environment & Forests (MoEF) before project implementation on Environmental Impact Assessment and Environment Management Plan
- Coastal Regulation Zone Clearance from Ministry of Surface Transport (MoST)/MoEF before project implementation
- Clearance from Director General of Technical Development/Director General of Foreign Trade for the import of capital goods and raw materials
- Other Clearances from Ministry of Finance and Reserve Bank of India related to Foreign Direct Investment (100% FDI is allowed in Port Sector)

- **State Government Clearances**

- Clearance that the site contains no land deemed to be reserved forest from Kerala Forest Department/Collectorate/Directorate of Town Planning
- Clearance under Electricity Supply Act from Kerala State Electricity Board and clearance for electrical installations from Chief Electrical Inspectorate, GoK
- Clearances for water supply requirements from Kerala Water Authority
- Approval of proposed design and construction of the project from Chief Inspector of Factories, GoK
- License for use of construction labour and registration of workers under the Employee State Insurance Act from the Labour Commissioner

# Government Guidelines

## State Government Guidelines\*

- Statutory and Regulatory functions of the Department of Ports (DoP) will be retained with the department and the commercial activities would be entrusted to the Kerala State Maritime Development Corporation Ltd (KSMD). DoP will help private players to get clearances from Central and State government.
- The investor shall be free to fix tariffs and set own employee policies.
- Coastal area and government land near the ports would be reserved for port development.
- Existing Tax Incentives in the industrial policy of the state would be extended to port development also.
- Existing infrastructure in the ports will be made available to private investors on mutually acceptable terms. Support facilities like bunkering, crew change, supply of fresh water etc. would be promoted through private participation. Support infrastructures like road/rail linkages to the port would also be permitted for development by private investors and allowed to collect toll.
- Private sector would be allowed to dredge, maintain channel and to collect user fees from the users of the channel. Port services like lighterage, pilotage and towage services, mooring, unmooring services, passenger amenities etc. would also be privatized and the investor for these would be selected on competitive bids.
- Establishment of Export Oriented Port based industries would be encouraged and the investor coming up with a supporting industry for the port would be given preference.
- Improvement of Navigational Aids and Communication facilities will be done by the regulatory authority.

\* Salient Features of the proposed port policy of GoK

# Government Guidelines

## Central Government Guidelines/Incentives\*

- Foreign equity upto 100 percent is permitted in construction and maintenance of ports and harbours and in projects providing support services to water transport, such as operation and maintenance of piers, loading and discharging of vehicles without requirement of an approval.
- A 10 year 100 percent tax holiday is available to enterprises carrying on the business of developing, or developing and maintaining, or developing, maintaining and operating ports, inland waterways or inland ports. This holiday can be claimed in a block of 10 years out of the first 20 years. The earlier condition of having to transfer the facility to the Government to be eligible for availing of the tax holiday/ deduction has now been withdrawn.
- External commercial borrowings (ECBs) are permitted to be used for rupee expenditure for port development projects.
- Holding companies/ promoters have been permitted to raise ECBs upto US\$ 200 million (or equivalent) to finance equity investment in a subsidiary company implementing projects for the development of port infrastructure
- Port development projects can finance upto 50 percent of their total fund requirements through ECBs. More than 50 percent may also be permitted to be funded through ECB depending upon the merits of the case.
- Profits of financing institutions from long term financing of ports are tax exempt. Long term capital gains of investors in such projects are also tax exempt.

\* Source: Confederation of Indian Industries (CII)

# Project Structure

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- Alternative Project Structures

# Alternative Project Structures

## **A few alternate project structure suggested are:**

- Formation of a Special Purpose Vehicle (SPV) with the joint collaboration between private party(ies) and the Government of Kerala. The SPV will raise money, construct the port and operate it. Government would have an equity share in the SPV to the extent of its contribution towards Capital Investment in select project components. The analysis herein assumes the above form of structure.
- The private player forms a consortium with other players in the port and related sector without government contributions. This consortium leases the land and other available infrastructure from the GoK. The development plan of the consortium has to be in consultation with the GoK.
- Any other project structure/variants of the above can be considered in consultation with GoK

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In association with **Department of Ports, GoK**

*This document is only intended to provide an indicative picture of the opportunity for the stated project. The project promoters are at liberty to conceptualize and structure the project different from that presented herein. The project promoters may choose to conduct a detailed analysis prior to undertaking the project.*