PROJECT REPORT

On

"A **study on competition faced by Visakhapatnam Port and the strategies adopted by the port"**

Submitted for the partial fulfilment of the requirement of the degree Master of Business Administration

In

Port and Shipping Management

By

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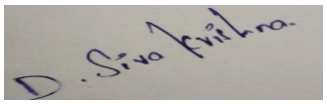
June 2021

Declaration

The project work titled “A study on competition faced by Visakhapatnam port and strategies adopted by the port” has been carried out under the direction of Dr Lekha Ravi in partial fulfilment of the requirements for the award of the degree of Master of Business Administration in Port and Shipping Management to be submitted to the School of Maritime Management, Indian Maritime University, Chennai Campus.



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Place: Chennai

Date:

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Acknowledgement

With great pleasure, I express my sincere gratitude to Dr, Lekha Ravi, Assistant Professor of School of Maritime Management, for the valuable guidance and suggestion that enabled me to complete this project successfully. I am extremely grateful to her for spending her precious time guiding me at every stage and accomplish this project work within the stipulated time.

Especially, I submit my thanks to my family who motivated and encouraged me throughout the project period. I would like to profoundly thank all respondents who helped me in collecting the necessary information for the completion of the project.

Datrika Siva Krishna

List of charts and figures

Chapter 1 -Introduction

Background

The study focuses on the competition faced by Vishakhapatnam port and methods adopted by Vishakhapatnam port as compared to Kakinada trouble port and krishnapatnam port of province, India analysing their financial performance and tariff rates and past performances furthermore. per the Ministry of Shipping, around 95 per cent of India's trading is by volume and 70 per cent by value is finished by maritime transport. India has 12 major ports and 187 non-major ports.

1.2 Total Cargo traffic at India's major ports

Maritime transport activity is driven by developments within the world economy. the degree of seaborne cargo traffic handled by ports is especially shaped by the degree and changes in both global and domestic activity. Cargo traffic at India's 12 major ports during April- November,2020-2021, decreased by 10.7% to 414.20 million tonnes from 463.73 million tonnes cargo handles during 2019-2020, due to the outbreak of the pandemic (COVID-19)

The overseas cargo handled at major ports decreased by 8.9% from 354.65 million tonnes during April- November, 219-2020 to 323.02 million tonnes handled during April- November 2020-2021. The coastal cargo handled at Major port decreased by 16.4% from 109.09 million tonnes during April- November 2019-2020 to 91.18 million tonnes handled during April-November,2020-2021

Cargo handling at Indian ports is matured over a long time but because of the outbreak of the pandemic there had been a small decrease in it yet, it's doing well within the tough times furthermore. the event of non-major ports thanks to growing private sector participation has led to a shift of cargo traffic from major ports that operate at above-optimum capacity, to the non – major ports. Since the Adani group acquired the Krishnapatnam port in the province. it's expected to control at above optimum capacity with their entrance there.

Historically, the ports along the geographical region have dominated the cargo traffic thanks to their proximity to India's major consumption centres and also the industrial belt in North-

West India. China's emergence as India's leading trade partner, India's "Look East" policy and overcapacity at the geographic region ports provide the geographical area ports with the chance to develop. The 50 ports that are situated along this coast is alleged to drive the growth increasing the full trade and capacity addition:

The marketplace for logistics and repair providers is marked by competition that's driving the productivity of the arena. The competition within the ports in India and abroad is seen as a pivotal thing about making the arena at par with international standards. The advancement of the ports is crucial to India to elevate its international trade transactions. the development of the inland waterways system will aptly contribute to his port advancement. Below are the ports that are being discussed within the project and every one of these ports is in the geographical area of India. Vishakhapatnam Port is that the major port, Kakinada trouble port and krishnapatnam port are considered to be minor ports.

Follows:

1.3 VISHAKAPATNAM PORT TRUST

It is the deepest landlocked port and guarded port built at the coast of the province. Vishakhapatnam port encompasses a capacity of handling 16.7 million tonnes of cargo traffic. It also has the shipbuilding and ship-repair industry. the first export items are ore (especially from Bailadila mines to Japan), manganese ore, spices and wood.

The import comprises mainly of oil, coal and other industrial products.

The hinterland of Vishakhapatnam port commands an approximate area of three.4 lakh sq, km which is constituted by Andhra Pradesh and therefore the contiguous parts of Chhattisgarh, Madhya Pradesh, Maharashtra and Karnataka. This part of the country is incredibly rich in natural resources and agricultural products in addition.

KAKINADA DEEPWATERPORT

Kakinada trouble port was commissioned by the govt of the province in November 1997 with a quay length of 610 meters. The Kakinada seaports took over operations when the port was privatized in1999. Ten years later, the port was expanded to 1900 meters of quay length for multi-product handling and a stand-alone facility for offshore suppliers for deep-sea exploration.

On the land, the port is surrounded by the districts of East Godavari and West Godavari,

Krishna, Guntur and also the entire Telangana region. Primary cargo of this region includes agricultural products, minerals, coal and fertilizers

KRISHNAPATNAM PORT

As India's economy continues to grow, its maritime trade and its percentage share within the world market are growing at a rapid pace. This unprecedented growth triggered a requirement for strategic port capacity to sustain trade at lower costs most effectively and efficiently, thus increasing India's share in international markets.

The krishnapatnam port company Ltd (KPCL) was informed by winning the mandate from the government. of state to develop the present minor port into contemporary, deep water& high productivity port, on BOST. Concession basis for 50 years. The port is being inbuilt in three phases. Post the complication of the primary introduces a record time of 18 months, krishnapatnam port was dedicated to the state on July 17, 2008. Currently, the second phase of development is underway. Port has numerous strengths like its area, location, weather and therefore the credentials of the CVR group that's promoting this port; it'll soon be poised to become one of the largest ports within the world.

OBJECTIVE OF THE STUDY

- To study vessel-related charges of the port
- To study the financial comparison of the above ports
- To study competition faced by Vizag port
- To study the strategies adopted by the Vizag port
- To study performances of the above ports
- To suggest the findings from the above study

SCOPE OF STUDY

Upon understanding the project report one can assess the tariff levied by Vizag port, Kakinada Deepwater port and krishnapatnam port. Besides this project report also contains the above ports performances for the past three years concerning traffic and financial aspects and it also contains strategies adopted by Vishakhapatnam port in respect to Kakinada port and Krishnapatnam port.

RESEARCH METHODOLOGY

This study is not based on any primary data sources and relies entirely on secondary data sources. All these secondary data sources are collected from the concerns port website, news articles etc.

STUDY LIMITATION

Limitations are the restrictive conditions under which the researcher has to carry on his work. Such restrictions are necessary and even unavoidable for the researcher to set boundaries by limiting the scope of findings.

Following are the limitations of the study

- The study is only based on secondary data
- The study is confined to Vishakhapatnam port, Kakinada port and krishnapatnam port
- The analysis of various tariffs and financial aspect for the above ports is limited to only three years 2018,2019,2020.

Organisation of the study

The study is research-oriented to analyse and assess the competitive advantage of Vishakhapatnam port trust and the various strategies adopted by the port. The entire study is set in chronological order for ease of understanding

Chapter 1 is an introduction about the study that includes objectives of the study, scope of the study, the research methodology being employed, limitations of the study and finally organisation of the study.

Chapter 2 includes a literature review and literature gap implies in line with my study regarding the competitive advantage of Vishakhapatnam port.

Chapter 3 contains the industry and cooperate profile of the above-mentioned ports and industry as a whole with a brief description of the study related to the objectives of the study.

Chapter 4 has the competition faced by Vishakhapatnam port in respect of krishnapatnam port and Kakinada deep water port and the various strategies adopted by the port and bring out the

various PPP projects as well which is the core of the research study with the data collected from secondary sources.

Chapter 5 finally includes the findings, suggestions, and a reasonable and meaningful conclusion with a direction for a future to carry on the study further as well.

Chapter- 2 Review of Literature

With its long coastline and strategic location, India is supposed to be in a dominant position in the maritime sector. Perhaps due to its poor infrastructure and policy framework, India extensively depends on other maritime nations such as Singapore and Colombo for transhipment. This is increasing the cost of imports and exports thereby placing a disadvantage in the global market. by considering these things Government of India has taken major initiatives to promote three transhipment ports, with world-class facilities in the southern part of India. It is expected that these ports will be able to compete with other transhipments ports particularly with Colombo, thereby bring the transhipment cargo back to India. so these strategies might help India in competing with global port players. **M. Bina Celine Dorathy, Port Integration foe Enhancing Competitive Advantage.**

Many ports and terminals around the world endeavour to enhance energy efficiency as energy prices have increased through the years and climate change mitigation is a key target for the port industry. Stricter environmental has been adopted by the port authorities to limit pollutants and GHG emissions arising from energy consumption. Increasingly, port operational strategies and energy usage patterns are under scrutiny. To ingrain sustainability and environmental protection of port industry to a low carbon port model by harnessing renewable energy alternative fuels, smarter power, distribution system, energy consumption measurement system. This paper has shown a research gap and future research directions were identified. Analysis has shown a great potential for ports to achieve further efficiency in the shipping industry: **a review of energy efficiency in ports: operational strategies, technologies and energy management system**

Owing to diverse functionality, seaports as entities produce a mixture of personal and public goods that have significant welfare implications for the regions they serve. In effect, seaports performance may be reviewed as multi-dimensional. When forming certain policies that affect multiple stakeholders it's therefore desirable to live performances across other dimensions, as they're likely to own differing effects concerning stakeholders. a group published studies on seaport performance measurement to spot, critically evaluate and integrate the assorted dimensions of seaport performance measurement: **port performance from a policy perspective- Eamonn Oconnor, Natasha Evers Dr Amaya Vega**

Research interest within the port industry has increased significantly in recent decades, because of the combination of ports in global supply chains strategies. Ports around

the globe face strong competitive pressure to fulfil modern demand characteristics. The motivation behind this work has been to analyse the works present in academic journals. Which comes under the ports port competition umbrella and identify niche areas of research. This study provides a detailed analysis of the different research angles of port competition being port selection, port productivity and port competitiveness. Recent results have shown that most works focus on topics related to port selection, efficiency, performance

"Existing pricing structures often suffer from trying to satisfy conflicting objectives - economists, port authorities, governments and port users will have different views on what constitutes an efficient port tariff" (Pettersen Strandenes and Marlow, 2000)

All tariffs applied by and within the port should be supported the short-run differential cost. This principle should be adhered to, even in situations where the authorities have made serious mistakes in their investment policy, or where the port is confronted with sudden and unexpected changes in demand. Bennathan and Walters (1979, p. 6) qualify this assertion to a particular extent: “strictly setting price adequate cost is best only in an exceedingly perfectly competitive free economy or inefficient socialism. In practice, the port is confronted with organised and largely foreign-owned shipping cartels”.

Many studies on the port tariff are done over twenty years using publicly assessed data on tariff. Public data for tariff rates don't reflect, however, the port tariff during a real market, since the cargo cost, which is that the important fraction of port tariff, is confidentially decided by the negotiations between a company and a container terminal operator. during this paper, the authors collected the important price data of the port tariff on the planet major sixteen container ports from a worldwide company and transformed it into tariff per TEU (US$/TEU). The comparative analysis of the port tariff was performed using the port tariff of 15 per TEU, and a panel multivariate analysis was done to spot the relations between the port tariff and demand variables: throughput, GDP and trade amount (Park & Kim, 2006).

Besides one Major Port i.e., Visakhapatnam Port, the state has 14 non-Major port locations namely Bhavanapadu, Meghavaram, Kalingapatnam, Bheemunipatnam, Gangavaram Nakkapalli, Kakinada SEZ, Kakinada problem, Surasena Yanam/Rawa, Narsapur, Machilipatnam, Nizamapatnam, Vodarevu and Krishnapatnam. Besides these locations, the Department of Ports, on its own, is working the Kakinada Anchorage Port for limited

operations**. Energy, Infrastructure & Investment Department – province Port Policy, 2015 – Orders - Issued.**

As the Indian port sector flourishes through a boom in external trade, it becomes crucial to look into the environmental impact it creates on the coastal seas. The research aims to determine the environmental consequences of a rising port sector in India and checks the effectiveness of measures taken to curb growing pollution caused by port operations. Researchers have offered a comparative perspective of the green performance of major ports vis-à-vis minor ports. Researchers have collected primary data across the 15 busiest major and minor ports of India from six different categories of stakeholders in the port sector, using stratified random sampling and questionnaire method. It was found that port operations caused considerable environmental harm in terms of water pollution, disposal of effluents, hazardous toxins and more. As for the effectiveness of remedial measures to atone for such damage, the researcher has provided a comparative analysis and found differences in the success rate of sustainable operations between major and minor ports. Lastly, the researchers have ranked the surveyed major and minor ports in order of their environmental impact and sustainability performance. **Eliza Sharma, Subhankar Das (2020)**

The state's ports are expected to play a crucial role in shaping the future development of the state and the entire East coast. This is borne by several economic and logistics trends. Energy, Infrastructure & Investment Department – Andhra Pradesh Port Policy, 2015 – Orders - Issued.

Ports are very critical in international trade, as they supply linkages between international and domestic production and distribution networks. they now transport centres and logistics platforms for international trade. the govt use to monopolise the transport sector, which might be attributed to the necessity of large-scale investments and long gestation periods, particularly when returns from the investment would even be uncertain. However, this has changed, especially within the context of globalisation and economic, liberalisation which saw increased commercialisation stemming from the expansion of international trade. This is drawn up the requirement to adopt new and improved technology, which also entailed considerable investment and augmentation of existing infrastructure, making it imperative that the private sector even be called in as a partner within the sector. Cuts centre for competition investment & economic regulation. As a result, a privatisation programme was initiated within the sector under the broad privatisation programme of the 1990s, which was aiming at improving the performance of the port sector, through the speeding of the investment process.

This displayed the arena to non-public players in addition, thus shaping the character of competition that's prevailing on a date. **This Briefing is written by Cornelius Dube and Kripi Sarawgi (Intern).** Indian ports Association was formed primarily with the thought of fostering growth and development of all major ports in India.

The purpose of this study is to perform a national comparison of port operations with the main focus on India- using information from Vishakhapatnam port, Kakinada port, Krishnapatnam port this study first focusses on their competitive advantage, comparative advantage and their efficiency in Indian container port operations. This study further focuses on how these Kakinada deep water and krishnapatnam port are developing in near future. This study also contributes to a better understanding of the competitiveness of developing ports that are viewed as rising stars. this study brings out the development activities implemented and is implementing in Vishakhapatnam port also this study mentions reasons behind Adani taking up krishnapatnam port and brings out their competitive advantages in acquiring. This study further compares these three mentioned ports in various aspects.

"PORTS FACE INADEQUATE CAPACITY, EFFICIENCY AND COMPETITIVENESS IN A DEVELOPING COUNTRY: CASE OF INDIA"

Authors: Prakash Gaur Shivani Pundir Tarun Sharma (2011)

These study measures have been initiated to increase the capacity of ports, but the immediate need to increase the efficiency in port operations is lacking. This paper highlights that how the ports in a developing country should increase their capacity from Effective Capacity to Potential Capacity and further to Absolute Capacity. Indian ports need to enhance their efficiencies at par with their international counterparts on all the parameters. This paper develops an efficiency index for Indian ports and recommends institutional cooperation among ports to achieve Potential Capacity and learn from best international practices to achieve Absolute Capacity

Hinterland dimensions of green port strategies by Marta Gonzlez Aregall, Rickard Bergqvist, Jason Monios

Despite growth strategies to reduce emissions and other externalities in shipping and ports, very little attention has given to the port’s role in reducing negative externalities in its hinterland. This study addresses a gap by studying ports across the globe to identify which

ports have implemented measures to improve the environmental performance of hinterland transport. The most common measures are found to be technology improvements, infrastructure development and monitoring programmers, and the most advanced ports in green hinterland strategies are Rotterdam, Loa Angeles/ Long Beach and Hamburg, although many ports in the world are leaders in green port strategies have not implemented measures in the hinterland dimensions. Different port groups are segmented according to their goals and measures as a foundation for future purpose.

Chapter 3- Competitiveness of Vizag port

According to the Ministry of shipping, around 95% of India's trading by volume and 70% by value is finished through maritime transport. In November Ministry of shipping was renamed as Ministry of Ports, shipping and waterways.

India has 13 major and 214

notified minor and intermediate ports. Under the national perspective plan for sagarmala, six new mega ports developed within the country. The Indian ports and shipping industry plays an important role in sustaining growth within the country's trade and commerce. India is that the sixteenth- largest maritime country within the world with a coastline of about 7,517kms. The Indian government also plays an important role in supporting the port sector. it's allowed Foreign Direct Investment (FDI) of up to 100% under the automated route for port and harbour construction and maintenance projects. it's also has facilitated a 10-year tax holiday to enterprises that develop, maintain and operate ports, inland waterways and inland ports.

Indian ports market size

India's key ports had a capacity of 1,534.91 million tonnes once a year (MTPA) in FY20. In FY21, all key ports in India handled 672.60 million tonnes (MT) of cargo traffic.

Merchandise exports reached US$255.92 billion in FY21 (until February 2021). The Government has taken several measures to enhance operational efficiency through mechanisation, deepening the draft and speedy evacuations.

Investments and Developments

- In April 2021, the competition commission of India has issued approval for the attempt to acquire Gangavaram port Limited by Adani Ports and Special Economic Zone Limited (APSEZ).
- The Indian Government has announced that seven major ports worth US$274 million will commence operations under the public-private partnership model in 2021-22.
- In April 2021, Adani ports signed an agreement with Vishwa Samudra Holdings Pvt. Ltd. to amass a 25% stake of Adani Krishnapatnam Port Limited for a consideration of Rs.2,800 crore

- In Marc2021, Adani ports and special economic Zone Limited (APSEZ) announced plans to amass a 58.1% stake in Gangavaram port limited for Rs 36.04 billion. The port is currently owned by DVS Raju and his family.
- In November 2020, Mormugoa port trust, operator of the western Indian port of Mormugoa, extended concessions on ore imports and export freight traffic until June 2021 to assist ease India's ore shipping trade amidst the COVID-19.
- In November 2020, Adani ports and Special Economic Zone Limited (APSEZ) completed the acquisition of Krishnapatnam port company ltd. For an enterprise value of Rs12,000 crore.
- The Port sector in India has received a cumulative FDI worth US% 1.63 billion between April 2000 and June 2020.
- In January 2020, DP world launched a replacement rail service between Kochi and Bangalore to lower costs and reduce transit time between the 2 cities by >40%.

Government Initiatives

Some of the major initiatives taken by the government to promote the port sector in India are as follows:

- India is predicted to start full operations in Iran's Chabar port by the tip of May 2021. India is building two terminals at the port and can operate them for 10 years.

- In Union Budget, 2020-21, the overall allocation for the Ministry of shipping was Rs. 1,702.35 crore
- The key ports the to deliver seven projects worth quite 2,000 crores on a PPP basis in FY22.
- The minister of finance proposed to double the ship recycling capacity of 4.5 million light displacement tonnes by 2024; this is often expected to get additional 1.5 lakhs employment opportunities in India
- In union budget 2021, the govt announced subsidy funding worth Rs. 1.624 crore to Indian shipping companies to encourage cargo vessel flag within the country.

- In February 2021, the foremost port authorities Bill,2020 was gone along the parliament of India. The bill aims to decentralise decision-making and reinforce excellence in major port governance.

3.1 Industry profile

source:- https://edubaba.in/wp-content/uploads/2020/03/Major-port-of-india-2048x1424.jpg

The Major Ports in India are witnessing sustained growth since the last decade, thanks to the vision of the Ministry of Shipping which was given the fillip to the port sector (maritime) by introducing vital and long overdue futuristic port-led development programmes including Sagarmala. The Ministry is intent on upgrading and developing the Major ports of India on par with international ports.

3.2 corporate profile

3.2.1 Vishakhapatnam Port Trust

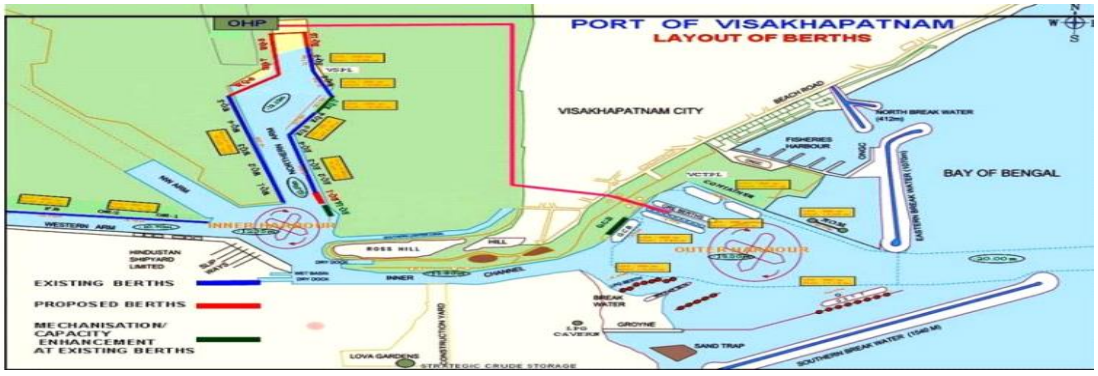


Image source:- Visakhapatnam port trust official website https://vizagport.com

[1]Vision

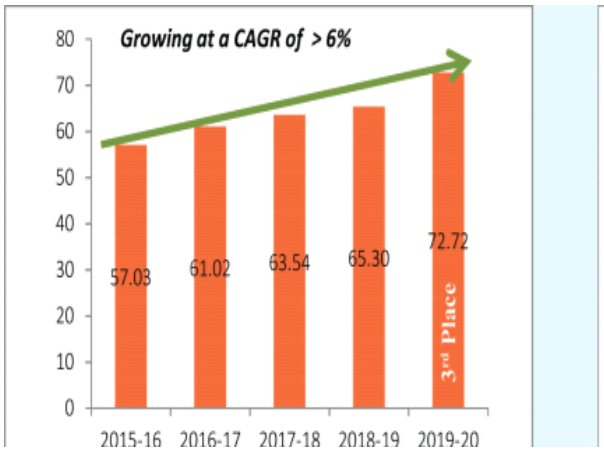
To be the most preferred port in South Asia offering services of global standards

Mission

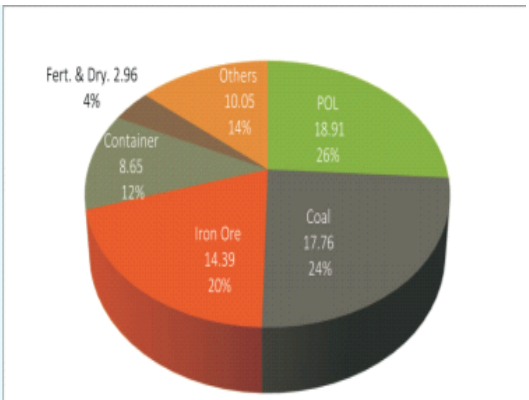
To be a major partner in meeting the logistics requirements of the importers and exporters of the region

The port of Vishakhapatnam is one of the 13 major ports of India. It is located on the east coast, midway between Kolkata and Chennai

The board of Trustees takes privilege in presenting the 87th Administration Report of the port of Vishakhapatnam for 2019-2020



Cargo trend in last 5 consecutive years



Cargo profile- 72.72 million tonnes

Image source: - file:///C:/Users/siva/Desktop/2019-2020%20vishakapatnam%20graph.pdf

The port is continued to be in a growth trajectory for the past four years. A quantity of 72.72 million tonnes was handled as against 65.30 million tonnes in 2018-2019 and also incremental traffic of 7.42 million tonnes is achieved during 2019-20 with nearly 11% growth. Therefore, the port also attained to be In 3rd place among the major ports and it is ranked on 2nd position among the ports of the east coast in terms of volume of traffic handled.

A quantity of 32.13 million tonnes of cargo was moved by the port railway system as against 27.54 million tonnes in 2018-19

Some of the notable achievements during 2019-20

[1] Official site of vishakapatnam Port

- For the first time in history, Vishakhapatnam has received a record of EXIM cargo of 72.72 million tonnes was handled by the port
- Vishakhapatnam port trust has accomplished 86 glorious years in serving the nation in developing the imports and exports
- A record quantity of 8.65 million tonnes of container cargo (5.04 lakh TEUs) was handled by surpassing the previous best volume of 7.96 million tonnes (i.e 4.50 lakhs TEUs) during 2018-19 by registering a growth of 9%
- An amount of Rs 100.28 crores was spent on Capital plan Schemes.
- A record quantity of 3.86 million tonnes of import POL Cargo was handled during the year surpassing the previous record of 2.93 million tonnes during 2018-19

Vishakhapatnam Port Trust Important Statistics 2019-20

Number of Berths	26+1 (SPM)
Electric Wharf Cranes	4
Shipping tugs	
Port – 6, Private - 2	8
Storage facilities (Dry)	
Port owned (Lakh Sq. Mtrs.)	
- Covered	0.48
- Open area within Customs	1.97
- Open area outside Customs	10.47
Traffic handled (Millions)	
- Exports	24.34
- Imports	46.32
- Transhipment	2.06
- Total	72.72
Output per berthday (Tonnes)	
- Mechanical	20,573
- Non-Mechanical	10,513
- Overall	14,901

No. of TEUs handled	503,630
No. of ships sailed	2,163
GRT of ships sailed (in millions)	68.26
Port Railway System	
- Track Length (KM)	180
- Number of sidings	14
- Open terminals	16
Cargo moved by Port railways (in million tonnes)	
- Inward (Iron ore)	6.92
- Inward (General)	3.75
- Outward (General)	21.46
- Total	32.13

source: file:///C:/Users/siva/Desktop/2019-2020%20vishakapatnam%20graph.pdf

Operational performance

Vishakhapatnam port handled cargo traffic of 72.72 million tonnes during the year 2019-20, as against 65.30 million tonnes in 2018-2019 by registering the growth of 11%

Import, Export and Transhipment details in million tonnes

Description	2019-20	2018-19	2017-18
Export	24.34	20.49	21.74
Import	46.32	43.73	40.49
Transhipment	2.06	1.08	1.31
Total	72.72	65.30	63.54

Category wise traffic for the 3 years

Description	2019-20	2018-19	2017-18
Dry Bulk	42.43	38.26	37.37
Liquid Bulk	21.05	18.26	16.87
Break Bulk	0.59	0.82	2.46
Containers	8.65	7.96	6.84
TEUs	(0.50)	(0.45)	(0.39)
Total	72.72	65.30	63.54

Highlights

- Port has been declared a winner for the 3rd time consecutive year in the port services sector for outstanding achievements in environmental management as part of the "19th Annual Greentech Environment Award, 2019" by the Greentech Foundation.
- It was also been declared as the winner in the services sector for outstanding achievements in safety management as part of the "19th Annual Greentech Safety Award,2019".
- Port of Vishakhapatnam ranked 3rd among major ports and 2nd on the East Coast in terms of traffic handled.
- A record quantity of 3.86 million tonnes of imp. POL was handled during 2019-20 as against 2.93 million tonnes handled during 2018-19

Port of Vishakhapatnam is continuing in exploring better business practices, modernise the facilities and improve efficiency for accomplishing continual improvement and also arrive into novel areas like Tourism, Fee trade Ware Housing Zones etc. for sustaining the growth trajectory.

[2]3.2.3 Kakinada Deep Water Port

India is a nation with the longest coastline which consists of 12 major ports and 212 non-major ports across the country. Kakinada port is located towards the eastern coast also considered to be the home to many global and national pharma players, and various companies have set up their manufacturing hubs in different cities of the state.

[2] Kakinada Deep water Port Officail site

Kakinada seaport on land is surrounded by the district of East and West Godavari, Krishna, Guntur and the entire Telangana region. Primary cargoes of the region include agricultural products, minerals, coal and fertilizers.

The deep-water port Is known for its strategic development of service modules to meet the unique requirements of specialised port users. To provide premier customer service, Kakinada seaports ltd has always embraced modern practices, system and technology to excel in port management and remain uniquely positioned as a multi-product dynamic port handling liquid, bulk and breakbulk cargoes. Agricultural products, granite and minerals move through a vast network of modern railway and highway like NH-16 and NH-216 to Kakinada where they are shipped to consumers in dozens of countries.

Port Location

Image source: https://kakinadaseaports.in/?page_id=61

vision

Kakinada Seaports Ltd aspires to position the port to meet challenges in a dynamic environment and ever-turbulent marketplace while offering performance and efficiency for port users. Our focus is on providing prompt, efficient, safe and integrated services to customers while maintaining world-class industry standards with a commitment to the socio-economic development of the Nation.

Port traffic During April 2020- January 2021

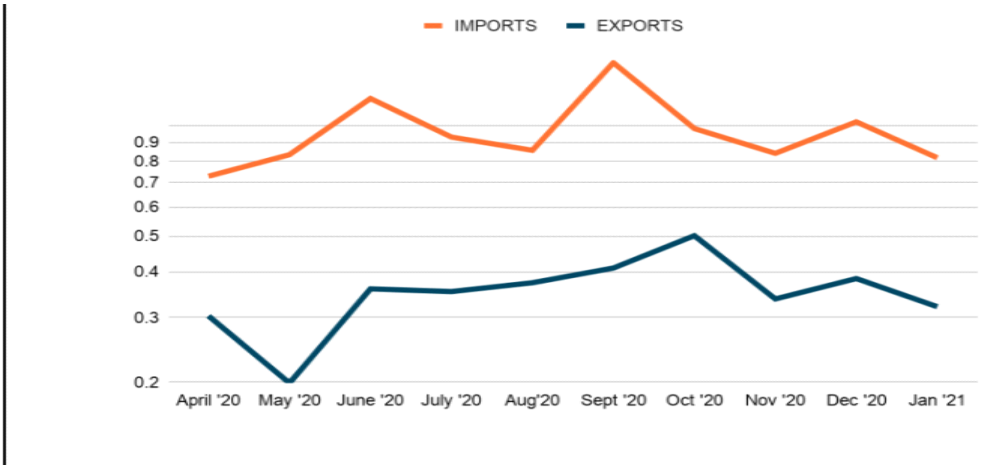
The port has handled 14.07 million metric tons

Total cargo traffic from 2018-19, 2019-20, 2020-21

YEAR	TRAFFIC (in MT)	%Increase or decrease
2020-21	14.047	+2.9
2019-20	13.692	-15.11
2018-19	16.131	-------

Cargo Handled During April 2020- January 2021 (Monthly Variation)

Cargo traffic in Million Tonnes



Source: source:- https://www.vctpl.com/pdf/vaartha-feb-2021.pdf

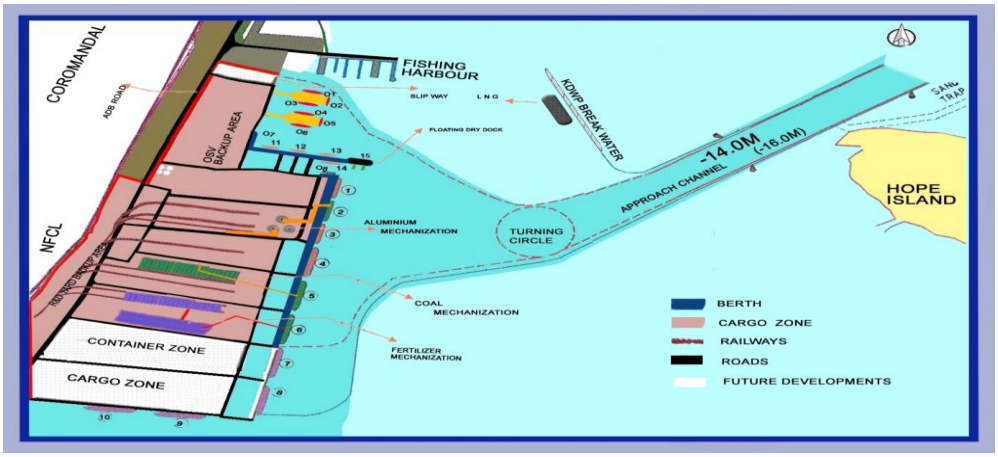


Image source:- https://kakinadaseaports.in/?page_id=169

Navigational Channel

Length: 11000 metres
Width: - 225 metres
Depth: 15 metres
Turning Circle: - 590 metres
Island Breakwater: - 1050 metres
Channel Buoys (Solar powered): - 23
Transit lights: - 2 no's

[3]3.2.4 Krishnapatnam Port

As India's economy continues to grow, its maritime trade and its percentage share in the world is growing at a rapid pace. This unprecedented growth triggered a demand for strategic port capacity to sustain trade at lower costs most effectively and efficiently thus increasing India's share in international markets.

KPCL was formed by winning the mandate from the Govt. of Andhra Pradesh to develop the existing minor port into Modern, deep water & high productivity port on a BOST concession basis for 50 years.

Port location

Location Details

- 180 km North of Chennai

[3] Official site of Krishnapatnam Port trust

- Located in Nellore (District HQ of Andhra Pradesh), on national highway 5 (Chennai-Kolkata)
- 26kms from Venkatachalam, the nearest Railhead on the Chennai- Kolkata Mainline
- Vast Hinterland covering southern Andhra Pradesh, Districts of Rayalaseema, North Tamil Nadu and Eastern Karnataka
- Being on the Eastern coast supports LOOK EAST Exim trade policy

Vision

Krishnapatnam Port – ON TIME, ON TASK. On The Move

- World-Class Infrastructure
- Efficiency
- Hinterland Connectivity
- Unrivalled Customer Service Along with Eco- Friendly Development

Krishnapatnam Port- New shipping Destination

Krishnapatnam Port Is Located in The Nellore District in The State of Andhra Pradesh on The East Coast of India Close to Southeast Asian Countries: An Ideal Port of Choice.

Krishnapatnam Port - Accessibility.

Multimodal Connectivity by Road and Rail to The National Grid.

Infrastructure

- 10 operational berths with more berths under construction
- 18.5-meter draft capable of handling Cape-size vessels (the deepest in India)
- No beam restriction
- Approach channel of 6.5NM
- 3 port-owned cutter suction dredgers
- 3 trailer suction dredgers for capital and maintenance dredging activities

- Dedicated tugs, high-speed pilot boats, barges and high-speed security boats
- Breakwater sheltered harbour

Facilities

Krishnapatnam Port operates on key parameters of operations including optimum cost, reliability and time. We offer high-quality services to customers. The loading/discharging rates for all cargoes are amongst the best in India. Port handles all types of cargo with three-tier security protection. A customs office is present inside the port providing quick customs clearance and documentation. Also, Krishnapatnam Port is working in several ways, including direct habitat preservation and pollution reduction, to protect the surrounding environs

3.4 Vishakhapatnam to become a transhipment "HUB"

With all-out efforts underway to elevate its ranking to the third position among major ports after Kandla and Paradeep, the Vishakhapatnam Port trust has set in motion an exercise to emerge as a transhipment hub.

The VPT, as a preparation to become a transhipment hub to handle mainland vessels with an overall length (LOA) of 397 meters to carry 15,000 to 16,000 containers from the present 320 LOA containing 6000 to 7000 containers, the VPT conducted simulation studies at FORCE Technology, Singapore, some time ago which proved the scope for handling bigger size vessels technically viable.

The VPT is also offering a 40% discount on vessel related and handling charges for coastal shipping.

3.5 Vishakhapatnam port and Ranong Ports to embark on Joint Ventures

A Joint Working Group formed by the ports of Vishakhapatnam and Ranong in Thailand to explore Business opportunities of Mutual benefits.

Separate memoranda of understanding (MOUs) were signed between the Port Authority of Thailand (PAT) and the port of Vishakhapatnam, Kolkata and Chennai to increase export and import trade through cargo handling. The Indian ports will also be allowed to use Ranong,

which is located on the western side of Thailand and is closer to India as compared to Thailand's leading ports Bangkok and Laem Chabang.

The Necessary MOUs were inked at the just concluded Bay of Bengal Initiative for Multi-Sector Technical and Economic Cooperation (BIMSTEC) here to strengthen bilateral ties between India and Thailand.

India wants to develop its ports as a strategic gateway to South East Asia. Nepal is using Kolkata and Vishakhapatnam ports as gateways for its EXIM trade.

VPT is also planning to explore coastal shipping in a big way besides tapping the huge trade potential in the Bay of Bengal countries and land- rocked countries like Nepal.

Vizag ports run beating Pandemic

Beating the economic slowdown and adverse market conditions, the Vishakhapatnam port trust has recorded a 10% growth rate the highest among major ports during the current fiscal.

After convincing the Tamil Nadu Electricity Board, the port has provided an end-to-end logistic solution for the supply of thermal coal. As of October-end, the VPT is ahead of the JNPT by 1.3 million tonnes and the gap is widening with the former adding the lead by another million tonnes in November.

The VPT has received an additional quantity of three million tonnes of iron ore mainly because of the renewal of supply agreements by the NMDC and the MMTC to Japan. Petroleum products, including POL and crude, have witnessed an increase of 2.4 million tonnes as of December 2019.

Container Cargo

The container cargo has gone up by 0.5 million tonnes because of transhipment to Nepal. Coking coal has gone up by one million tonnes. Thermal coal quantity has fallen, but the VPT officials have exuded confidence after their talks with the TNEB and they are expecting more thermal coal handling in the next few months.

3.6 Kakinada set to be "Industrial Park"

Well known GMR is all set to develop an all-weather, multi-cargo, deep-draft, Greenfield Commercial Port located adjacent to the Industrial Park in East Godavari District, Andhra Pradesh. The port will spread over an area of approximately 2000 acres and it is expected to 16 million tonnes of cargo per annum in the first phase with 2 general cargo berths and 1 coal

berth. The port has also already received Environment Clearance and Consent for Establishment. In phase-2 the port is expected to handle liquid cargo with crude and petroleum oil products with the final plan including 11 berths being built at the port.

The port is also expected to have a seafront of approximately 6km with a proposed draft of 17+ mts enabling it to handle cape size vessel (120,00 DWT). The port is also expected to be operational by December 2023.

3.6.1 Kakinada Industrial Park

Kakinada industrial park strategically located on the Vishakhapatnam- Chennai industrial Corridor

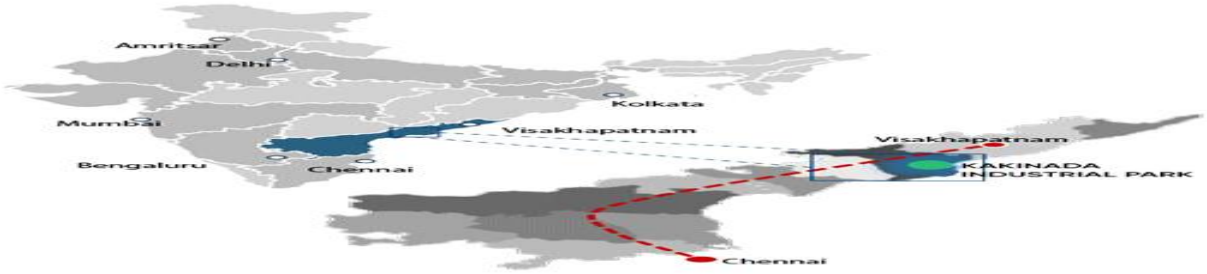


Image source: https://gmrkakinada.gmrgroup.in/advantage

Resources

- Kakinada Port has excellent natural resources available on its surface per se:-
- Marine Resources
- Oil and Gas 300k MT (from land)
- Food (Sugarcane, Fruits, Cashews, Chilli, Tobacco)
- Minerals (Mica, quartz, Limestone, Beach Sands)

Port of Kakinada is easy to access to natural gas fuel and it is a key advantage to Kakinada

Image source: https://gmrkakinada.gmrgroup.in/images/advantage/KIP/Refinery.jpg

2000 acres of dedicated land within the KIP to develop a private port offering multiple advantages to the KIP tenants.

- Development to start the year in FY 2020-21
- It has a Dedicated coastline running up to 6kms
- Ease of access to SEA countries
- Draft to be 17m + draft
- Option of customization for KIP tenants

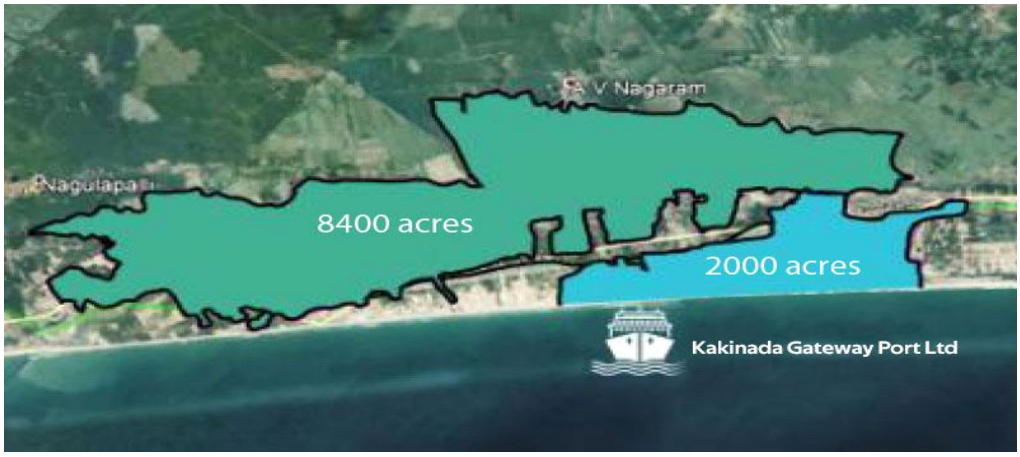


Image source: - https://gmrkakinada.gmrgroup.in/images/advantage/KIP/kip-port.jpg

Kakinada Industrial Park -25 km from Kakinada Deepwater seaport with dedicated container handling facilities.

3.6.2 krishnapatnam "Industrial Hub" Port

The location of the port has seen as a port of choice of the new world, with the manufacturing behemoth China on the right, surrounded by a string of hyperactive South-Asian economies. With this considering as an advantage, a new industrial cluster is coming up around the port which will be a geographical marker for global trade.

It is located as a strategic location- covering Andhra Pradesh, Telangana, Karnataka and Tamil Nadu. Major consumption centres like Hyderabad (490km), Bengaluru(380km), and Chennai(180km) can be serviced from the port

Upcoming projects around the Port

The upcoming power projects in the vicinity of Krishnapatam Port will require coal above 40 MTPA. In Addition, 38 Mn MTs of coal required for:

Existing Power Plants In Hinterland of the port which Blend Imported Coal Krishnapatnam also Cement and steel Plants in the Hinterland Sourcing Coal from Australia, Indonesia and Mozambique.

Other port-related industries

There have been immense opportunities for the port-based lubricant plants, Sugar Refineries, Cement and steel manufacturing plants to come up around krishnapatnam. SBQ steels with a 0.5 million MT steel integrated plant is already operational near the port.

Other industrial sector Developments like Leather Park and IFFCO Kisan SEZ are also coming up around the port.

Due to the phenomenal growth of the port and the industries around it, Krishnapatnam has been finalised as one of the three industrial nodes in the Chennai-Bangalore industrial corridor (CBIC). These CBIC is being promoted by the Indian and Japanese Governments.

Similarly, Krishnapatnam has been a part of the Chennai- Krishnapatnam- Vishakhapatnam Industrial corridor.

Steel plant Krishnapatnam

Image source: https://kpcl.com/img/stell-plant.jpg

Cement Plant Image Source:- https://kpcl.com/img/cement-plant.jpg

Chapter- 4 strategies induced by the VPT in Competition to other ports

[i]VPT to retain 3rd position

Challenging time across the globe caused by the pandemic Covid-19 distributed human life and in turn, it also affected international trade. The impact of volumes has affected the throughput of the ports as well. Normal life came to a standstill, the pattern of living changed, EXIM movement has seen a great fall, prices varied, consumption pattern has seen a drop thus the overall volumes have come down too. Despite the tough times, Vishakhapatnam Port Trust did not lose its mettle and continued to perform ensuring to meet the customer's requirement.

During this testing time, VPT ensured to be in the top 5 positions and is all set to retain 3rd position in handling cargo following Kandla and Paradip in this financial year 2021. In FY19-20 VPT had set up a new record by handling 72.72 million tonnes by overtaking JNPT and registered 3rd position.

In this year current financial year, VPT has already crossed a throughput of 51.95 million tonnes during the corresponding period last year. There is a shortfall of 1.59 million tonnes attributed to the pandemic caused by COVID-19. the major cargo handled this year also includes iron ore and pellets 13.53 MT, POL 12.18 MT, container 6.18MT and other cargo 9.44 MT**.**

Vishaka Container Terminal being a PPP operator at Vishakhapatnam port Trust is an ideal gateway on the east coast of India to carry EXIM activities and had its volumes contribution positive with year-on-year growth at a CAGR of 22%. To support the future estimated incremental volumes VCT will be all-ready with an expansion plan of Terminal along with extended Quay will become 650 after completion of additional 200 m. The expanded terminal will also have the upgraded equipment in the form of 3 new sugar post-Panama cranes with twin lift capacity along with 9 eRTGCs.

[4]VPT Bags INR 4095 crores Funds

Among the 12 major ports in India, Vishakhapatnam port trust stands with greater reliability and consistency on the East coast of India. The centre is planning to invest around Rs.4095 cr for the modernisation and expansion of Vishakhapatnam port. This investment will increase the port's capacity from the existing 126 million tonnes to 141 million tonnes by FY 2023. This investment will primarily focus on enhancing berths, developing logistics and connectivity infrastructure and developing channels. This project will be accomplished by public-private sectors collaborations.

These funds will be utilised for up-gradation and mechanisation of the existing iron ore and coal handling berths along with the general cargo berths at the outer harbour. Along with this, there are plans for better connectivity and logistics sector improvement. CONCOR's MMLP second phase is also in the investment list along with Blamer Lawrie's multi-modal logistics hub. There are 12 projects which are under the design, Build, Finance, Operate & Transfer modes where the existing container terminal is also under the process of expansion by adding 9.5 MMTA capacity.

Vishaka Container Terminal which is set up under Built Operate & Transfer basis is one of the major players in this mega-investment at PVT. VCT is having its existing terminal expansion plan in progress to support the growing trade's requirements. After completion of the expansion project, VCT will place itself with an overall capacity to handle about 1.5 million TEUs per annum. In the coming years, VCT would act as a catalyst in attracting larger container vessels adding towards the overall growth of Vishakhapatnam port.

HASSLE free port, VPT- A gateway to large vessels

Erstwhile during September 2019, Vishakhapatnam port trust and M/S Force Technologies, Singapore conducted a simulation study to explore the possibility of handling bigger size container vessels at the outer harbour followed by the baby cape/ cape size vessels in the inner harbour. The simulation study successfully demonstrated the capacity of handling bigger container vessels of 390 meters in length. This large vessel would generate opportunities to carry about 15000 TEUs per call considering the vast hinterland and potential that Vishakhapatnam has.

[4] Ministry of Ports, Shipping and waterways

Vishakhapatnam being the natural harbour with a depth of 16 meters draft will be an ideal gateway to handle such a big container vessel in all fair-weather conditions. The outcome of the simulation study is expected to be a game-changer by enabling VPT to handle bigger container vessels in the outer harbour. The port implemented the results of the study after imparting required training to the pilots and increase of the capacity of Tug power. With this development, the entire scenario of the cargo operation at VPT would change shortly paving way for VPT to become a potential container Transhipment Hub on the East Coast.

VCT Expansion progress

source:- https://www.vctpl.com/pdf/vaartha-feb-2021.pdf

The expansion of the Visakha Container Terminal is going on in full swing, Although the project got delayed due to this COVID-19 pandemic disruption, the berth construction work is now continuing hassle-free. The existing berth length of VCT is 450 meters is being extended by another 395 metres quality will be ready by the end of Mar'21. The additional equipment - 3 super post-Panama Quay cranes and 9 eRTGCs are in pipeline and are expected to be delivered by Sep'21. The additional quay length will create room for more windows berth at VCT where new services are poised to make their way into the terminal.

Port Land to develop NEW Industries

61 per cent of India's cargo traffic is handled by the 12 major ports that carry the EXIM activities under the aegis of the Central government. Visakhapatnam port trust is one of the major ports that have the natural advantage of being strategically located in the centre of the East Coast of India. Moreover, the port is blessed with the best marine parameters with a natural depth of 16.5 meters. Dedicated road corridors and best rail connectivity to facilitate seamless movement of EXIM traffic.

Collectively about 1.10 lakh hectares of land is available with the 12 major ports where the utilisation is only at 50% and hence there is room for more usage. In the latest development from the Ministry of shipping, it has been declared that a part of this available land will be used for developing and setting up new industries. Till now the port land was used for earning rent but taking a step forward now it will be used for generating employment, increasing EXIM movement and developing local production. Visakhapatnam port trust has plans in place to set up a logistics park that would attract 3PL,4PL movements which Are the game-changer in today's scenario. This will enable companies who are stalwarts in the e-commerce business to make Visakhapatnam their distribution centres to meet the customer's requirement. With the impact of COVID-19, direct buying and selling has taken a backseat thus increasing the sales of e-commerce. The presence of a logistics park will enhance the EXIM traffic through the city of destiny Visakhapatnam.

Visaka container terminal under the support of Vishakhapatnam port trust is an ideal gateway on the east coast of India to carry EXIM activities with a container growth at a CAGR of 22%. With many more new companies coming up in the vicinity of Visakhapatnam there is a wide scope of increased volumes through VCT. To support the expected increased volumes, VCT is all set with its expansion plan of terminal adding quay length of annual 400 meters, post completion of which, VCT will have the longest berth in a linear form with 850 meters thus allowing super post Panamax vessels to find their way into the terminal.

Visakhapatnam port trust plans to set up an international trade HUB

The container traffic at the port city, Visakhapatnam has been consistent over the years since the inception of the Visaka container terminal. There are a good number of container freight stations to cater for the needs of the trade, however, what was lacking in this region were full-fledged value-added services like packing, re-packing, labelling, kitting, bundling, palletizing etc. while the per capita income in Vishakhapatnam and its hinterland is increasing consistently, the consumption of FMCG cargo, electrical & electronic goods etc, are on a rise too. These commodities are currently coming from the neighbouring ports of Visakhapatnam which add costs to the consumer for the additional km of transit. It will be an opportunity for the logistics service providers and a breather to the consumer that considering the huge potential available, Visakhapatnam port trust planned and proposed to set up a free trade warehousing zone near the port EXIM part close to the airport which will be spread across 106

acres with an estimate of 500 crores where funding is planned to be done by VPT and Sagarmala development cooperation limited (SDCL).

Visakhapatnam has the global connectivity to/ from the eastern sea lane and the western sea lane where the main lane services calling Visakha container terminal from both the corridors can act as a bridge to attract imports of aforementioned goods which can be worked through the FTWZ similarly, other spares of electronic goods like AC, mobile panels chargers, power banks etc. can allow commodity that can be worked through the city of destiny, Visakhapatnam that comes from China & USA. The good news is that one of the big retail players with a group of channel markets is already entering into Visakhapatnam domestic market supply and had identified huge land for this process set up. With the initiation of the FTWZ, more international players, investors would eye to invest in this region that would, in turn, increase the container traffic movement through the ideal gateway on the east coast of India, Visakha container terminal of both EXIM and coastal movement.

[5]DFC connectivity to Andhra ports

Dedicated freight corridor cooperation of India limited (DFCCIL) is a public sector undertaking cooperation travel by the government of India's Ministry of Railways to undertake the planning, development and mobilisation of financial resources and constructions, maintenance and operation of the Dedicated Freight Corridor. The proposed DFCs are the next mega project under Indian railways. The railways will build around 4000 km DFC for connecting industrial sectors of eastern and western parts of India with southern India i.e., Andhra Pradesh and Odisha.

The proposed DFC's will be from (1) Kharagpur to Vijayawada: 115 km (2) Bhusaval- Nagpur-Kharapur- Dankuni: 1673km (3) Rajkhaarswan- kalipahari- Andal: 195 km. these DFC's will ease the congestion on the existing over-saturated sections on the railway network, terminals, & junctions and ensure faster movement of goods. Various industries like Ferro Alloy, Iron and ore etc fall in this stretch.

This corridor will bring pollutions free transportation of cargo and use of cost-effectiveness that will develop the ports of Andhra Pradesh and Visakha container terminal in particular.

[5] Vizag Contaier terminal news Paper

Visakhapatnam has a vast and unique hinterland where Odisha based cargo is largely routed through VCT by rail beside the established road network.

Private container rakes will also be able to use the DFC by paying track usage changes. With growing international trade through sea route, there is a need for faster cargo evacuation, from factories to ports and vice versa. Post setup of DFC, the passenger traffic and goods traffic will be separate creating room for quicker movement of cargo thus the efficiency is increased too. Not to forget that more companies in this route will get direct access to move their containers on rail connecting to the vessels through VCT, which is indeed a huge cost saving. The DFCs will be the key for many mini, small and medium and large EXIM players to record to retail transportation.

[6]4.2 KG- D6 Basin

Reliance industries limited (RIL) and BP announced the start of production from the R Cluster, ultra-speed -water gas field in block KG D6 off the east coast of India. RIL and BP are developing three deep-water gas projects in block KG-D6 R cluster, Satellites cluster and MJ- which together are expected to meet – 15% of India's gas demand by 2023. These projects will utilise the existing hub infrastructure in the KG D6 block. RIL is the operator of KG D6 with a 66.67% participating interest and BP holds a 33.33% participating interest.

R Cluster is the first of the three projects to come onstream. The field is located about 60 kilometres from the existing KG D6 Control & Riser Platform (CPR) off the Kakinada coast and comprises a subsea production system tied back to CRP via a subsea pipeline. Located at a water depth of greater than 2000 meters, it is the deepest offshore gas field in Asia. The field is expected to reach plateau gas production of about a 12.9million standard cubic meters per day this year.

[7]Reason Behind the Adani Acquiring Krishnapatnam Port

KPCL is a multi-cargo facility port situated in the southern part of Andhra Pradesh. This acquisition will accelerate APSEZ's progress towards 500 million tonnes cargo handling capacity by 2025 and is another step forward in its stated strategy of cargo parity between the

[6] News articles
[7] Adani site

west and east coast of India. It is the second-largest private port in India and it is now the part of APSEZ portfolio.

With a vast waterfront and land availability of over 6,700 acres, KPCL is capable of replacing Mundra and would be future-ready to handle 500 million tonnes. On the other hand, it also continues to focus on environmental aspects, reduces emissions levels and zero tolerance levels for facilitates so that it can improve returns to its stakeholders.

Last year when Adani ports and special economic zone ltd has come up with its ambitious plan to handle a throughput volume of around 400 million tonnes by 2024-25, many of them not expected to reach their goal through the inorganic acquisition route.

So, however, you know with three big acquisitions at a combined value of Rs 18,000 crore in the last 6months, Adani ports are rushing on their way to achieving the mentioned target.

Impact on Indian Market

This acquisition of the ports in the last six months by Adani increases its port's market share by 30 per cent on pan Indian- basis

These strategic benefits of its acquisitions not only make Adani ports the largest private port operator in the country, but perhaps it also gives it control over the hinterland cargo.

Vizag Container Terminal of Adani

It is developed to handle steam coal in the inner harbour of Visakhapatnam port, the Adani Visakhapatnam port terminal is a fully mechanized facility with coal storage of 25 acres. The port terminal is connected to the national network of Chennai- Visakhapatnam- Howrah rail corridor through Visakhapatnam port terminal R&D yard, though it is connected to National Highway No.5 (Chennai- Kolkata) is about 4 km from the port. And through the air, Visakhapatnam airport is 10 km from the port and is well connected with all major domestic and international airports.

Chapter-5 Conclusions and Findings

Based on the study it was found that

Importance of shipping for economic growth

The major economies of the world have always been behind the development of the maritime industry, as it is considered as a major contributor to the maritime industry

Perse, control of the seas is a key component of China's development as the Belt and Road initiative (BRI).

However, geographically, China is not as blessed as India, yet, seven of the top 10 container ports in the world are in China, according to the World Shipping Council, strong merchant marine and infrastructure are the main reasons for the growth of China's development.

India lacks

- All the shipping infrastructure in peninsula India only helps foreign shipping liners.
- India has always focused on short-term solutions.
- Foreign ship owners carry our inbound and outbound cargo and It is also the same in container shipping too
- As a country, India has not still optimized its carrying capacity to the full extent.
- Too much foreign currency is drained as transhipment and handling costs every day.
- Due to this, members of our maritime business community have also preferred to be agents for foreign ship owners or containers liners rather than becoming ship owners or container liners.
- As a result, there is a wide gap between carrying capacity and multi-folded cargo growth in the country.

Way forward

Instead of creating regional cargo-specific ports in peninsular India, India has allowed similar infrastructural developments in multiple cargo-handling ports.

India has to make its ports cargo-specific, develop infrastructure on a par with international standards and connect them with hinterland as well as international sea routes, they will automatically become transhipment hubs.

India solely has to concentrate on developing the contributing ports to serve the regional transhipments hubs for which improving small-ship coastal operations is mandatory.

Sagarmala Initiative

- Sagarmala aims are port-led industrialisation, the development of world-class logistics institutions and coastal community development.
- This sagarmala initiative will help in increasing domestic carrying capacity.
- Shipbuilding, repair and ownership are not preferred businesses in India and the small ship owning community in India also prefer foreign registry instead of domestic registration.
- A “make in India” initiative may result in multi- folded cargo growth in the country, India also needs ships to cater to domestic and international trade.
- This will initiate the carriage of cargo by shallow drafted small ships through coast and inland waterways.
- Sagarmala should concentrate on consolidating the strength of the coastal youth and make them contribute to the nation’s economy with pride.

You know more than 90% of India’s trade volume is conducted through the country’s maritime route, there is a continuous need to develop India's ports and trade-related infrastructure to accelerate growth in the manufacturing industry and to assist the “Make in India”. India has 13 major ports and many minor ports. Major ports are administered by the central Government and minor were under the control of the State Government.

Vizag port trust is looking to be the busiest port in south India also heading to surpass India's major revenue earning ports like JNPT and Chennai port trust. Vizag port trust is also planning to establish container freight stations so that everything happens there without further transportation.

The trustees of the port are on a plan to build new industries in the portland as well so it enables profit to the trust and makes it one of the best ports in terms of ease of doing business.

Owing to its reliability and consistency the centre has planned to invest around 4095 crores to modernise and expand the port activities. Funds released will be utilised for the up-gradation of the port and all the developmental activities will be undertaken on the PPP model so it can enable private participation as well.

This study also found that Adani ports special economic Zone (APSEZ) is acquiring most of the ports as they found that there are a lot more growth opportunities in this sector in near future since maritime trade playing a crucial role for the past two decades and a lot more to come.

The acquisition of minor krishnapatnam port has proven this and APSEZ is planning to make it as best port in the industry and India as well with the implementation of global standards.

This study has given me a lifetime Opportunity to understand the port competition and port strategies considering Vishakhapatnam Port Trust, Kakinada Deep Water Port and Krishnapatnam Port which are along the east coast of India.

Conclusion

From the study, it is very much evident that the Indian maritime sector is going to be on a different level as a whole. In addition, the GOVT of India started focusing on the all-round development of major and minor ports in terms of infrastructure and upgrading to latest technologies to smooth functioning of the port thereby reduce delays. GOVT of India started collaborating with private parties and work mutually in development of the ports, in that manner krishnaptnam port was acquired by Adani for overall development of the port.

It was found that even in these critical times of Covid-19 Vishakapatnam port is running beating the pandemic conditions.

In these testing conditions port remained in 3rd position following Kandla and Paradip

CHAPTER 6 - REFERNCES

- Indian Ports Association

  Coordination of business plans for major ports in IndiaConsolidated port development plan
- Indian Ports Market Size https://www.ibef.org/industry/ports-india-shipping.aspx
- Vishakhapatnam Port Trust Official Site https://vizagport.com/news-events/
- Kakinada Deep Water Port https://kakinadaseaports.in/
- Krishnapatnam Port Trust https://www.adaniports.com/
- Vishaka Contaienr Terminal News Letter
- M. Bina Celine Dorathy, Port Integration foe Enhancing Competitive Advantage.
- port performance from a policy perspective- Eamonn Oconnor, Natasha Evers Dr Amaya Vega
- Hinterland dimensions of green port strategies by Marta Gonzlez Aregall, Rickard Bergqvist, Jason Monios