

# AN OVERVIEW ON SAGARMALA

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## **ABSTRACT**

Maximum of India's buying/selling business is by maritime route, there is a need to spread India's ports related infrastructure to increase in rate in the industry. India has 12 major ports & 200 non-major ports.

Sagarmala project is for port modernization, new port Development, Hinterland connectivity, Multi – modal Logistics, Inland Waterways, International shipping, coastal shipping, ship building, ship repair, ship recycling, port led industrialization, green initiatives, cruise shipping & lighthouse tourism. By transforming existing ports into world class ports which reduces the cost and time for transporting goods by using waterways, which is beneficial for industrial growth and EXIM trade and boost in GDP is expected in next twenty years. NSAC (National Sagarmala Apex Committee) not only deals with industrialization, but also creates employment for many coastal communities. This 120 billion USD project is expected to develop India logistically by increasing volume of inland water ways and coastal shipping. This programme also helps in reduction in fuel consumption and cost reduction compared to transport on wheels.

**Keywords:** MMTPA- Million Metric Tonne Per Annum, EXIM-Export & Import, GDP-Gross domestic product, CEZ- Coastal Economic Zones

## **1. INTRODUCTION**

### **THE CURRENT INFRASTRUCTURE SCENARIO**

The country has not much watchful on developing the coastal & port facilities in an integrated manner that would have realized its full potential. Most of the ports in India lack adequate cargo handling facilities. The ship turnaround time is deprived compared to greatest amount of other developed ports in China, Japan, Korea, Dubai, Netherland, etc

.The charging & discharging processes are slow moving. The rail & road connectivity to the hinterland is insufficient .Industrial centers near port locations that can offer value addition is also unavailable.

India's growth in maritime sector is coerced due to many developmental procedure & policy related challenges namely involvement of multiple agent in development of facilities to promote industrialization, trade, tourism & transportation, lack of requisite infrastructure for evacuation, limited hinterland linkages that increases the cost of transportation and cargo movement, limited development of centres for manufacturing, limited mechanization and procedural bottlenecks and lack of scale, deep draft and other facilities at various ports in India.

## 1.1 DEVELOPMENT OF PORTS

Sagarmala project is a deliberate & customer oriented eight trillion investment entailing setting up of more than 6 mega ports, modernization of 12 more ports, development of 14 coastal Economic zones and at least 29 coastal Economic units, improvement of mines, industrial corridors, rail, road & airport linkages, indirect jobs, generation of more than one lakh direct job. It aims for modern world class ports

### Objectives

- 1, optimizing time of EXIM container movement.
- 2, optimizing cost of EXIM container movement.
- 3, Reducing cost of transporting domestic cargo through optimizing model mix
- 4, Reducing berthing time & over all turnaround time of the ship.
- 5, Standardize anchorage charges to reduce berthing time & overall turnaround time of ships.
- 6, Improve utilization of port assets and create additional capacity without any significant capital investment.
- 7, Increasing major port by creating value for the trade by reducing cost of logistic.

### IMPORTANCE OF SAGARMALA

1. The location of India is a international trade route in Indian ocean & India has a long coastline of over 7,000Km.Due to lack of modern facilities at ports it affects tremendously &

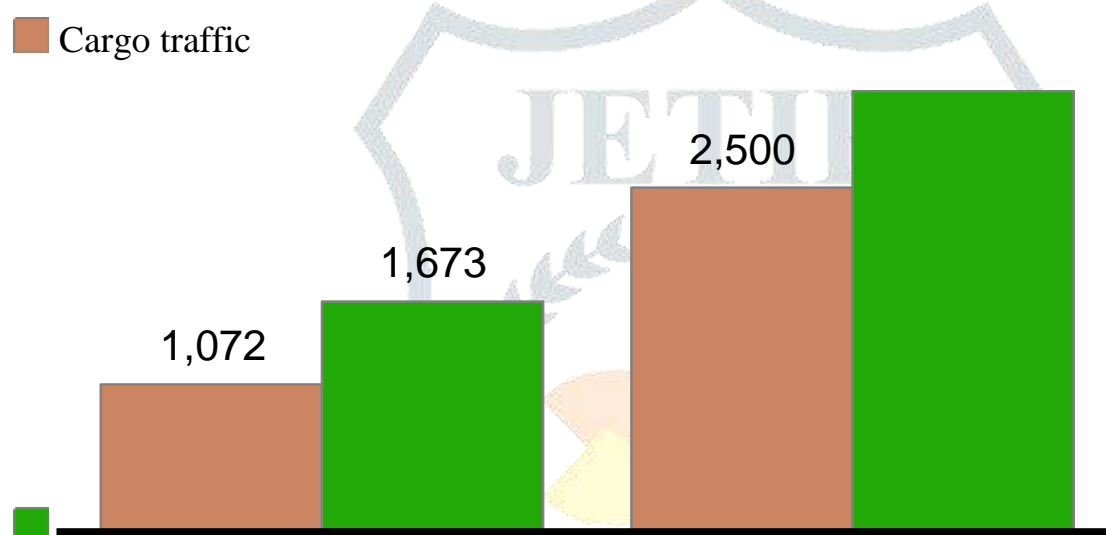
elongates the time taken to ship goods in and out of the country so India's share held back in world level trade.

2. The transporting costs are high in India 18% of GDP as compared to other country.
3. Development of port & Linkages has been a sinking ship. This led to sagarmala project. This can boost India's trade by 110 billion by 2025

### 1.1.1 Port modernisation

a) De-bottle necking existing ports & b) Capacity improvement at existing ports.

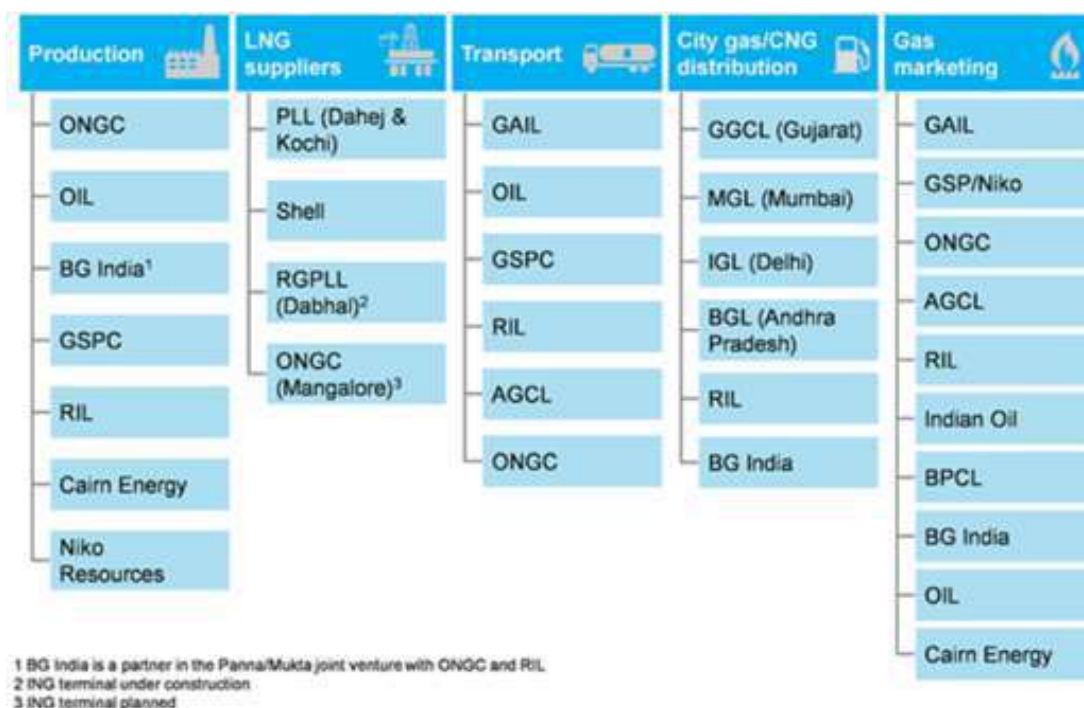
Capacity build-up at Indian Ports



Port capacity

Domestic demand for LPG is expected to grow from the current level of 16 MMTPA at about 5 per cent per annum and by 2025, can increase to anywhere between 28 MMTPA to 35 MMTPA, depending upon the pace of urbanization and growth of piped gas penetration. Industry estimates fix the figure at around 33 MMTPA. As against this, domestic production of LPG is expected to increase to 14 MMTPA by 2025. Given India's present LPG import capacity of 7 MMTPA and the projected capacity increase of 3 MMTPA, this leaves a gap of nearly 9 MMTPA which needs to be provided for. This will require enhanced import capacity at ports in Haldia, Paradip and Gujarat ports to supply gas to the LPG deficient states of northern and eastern India. Additionally, product pipeline infrastructure will have to be augmented to carry the product from ports to LPG terminals/depots.

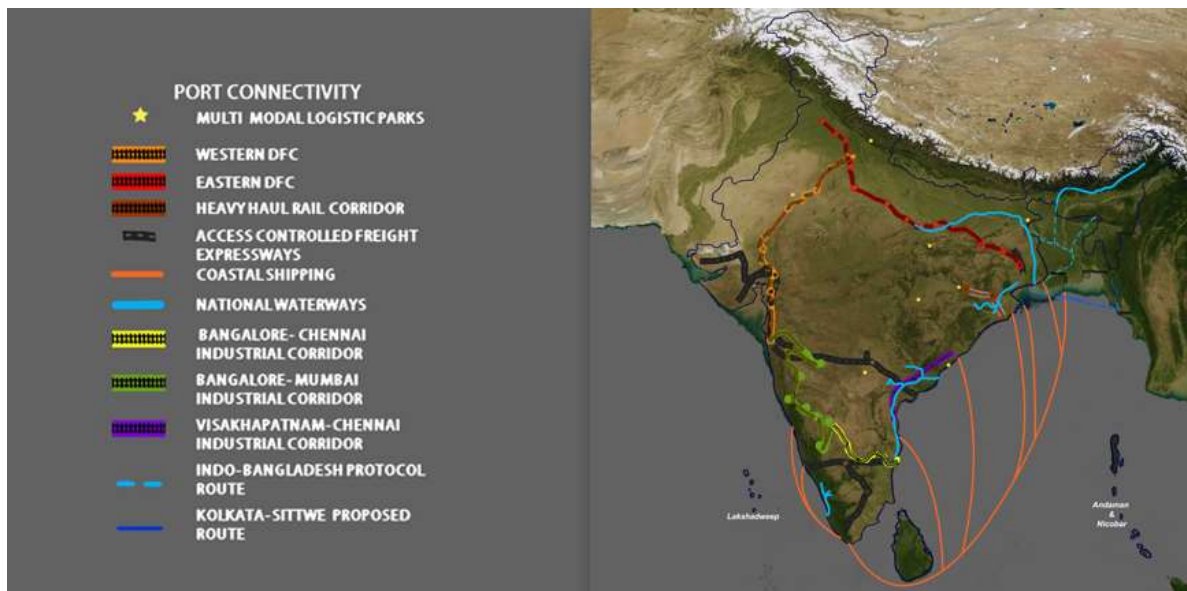
Currently about 9 per cent of India’s primary energy demand is met through natural gas, making it the third largest energy source in the country after coal at 53 per cent and oil at 30 per cent (Exhibit 22). This comes to 57 million metric tons per annum (MMTPA) (~205 million metric standard cubic meters per day) of total gas consumption in the country of which 48 per cent is used for power generation and 38 per cent by industry.<sup>1</sup> The rest is utilized for residential, Commercial, transport and other uses. The major players involved in production, supply, transport, distribution and marketing of natural gas can be seen in tabulation.



### 1.1.2 Port Connectivity Enhancement

Highways, Railways, Inland water ways, Pipelines, Multimodal Logistics Hubs.

Port connectivity is important for multimodal logistic



This project gives enhanced connection between the ports. Some of the types of connectivity projects considered are listed below:

- Initiation of coastal berth development at various ports
- Proposes heavy haul rail corridors
- Plan for 37 national waterways.
- East west dedicated freight corridor connecting Kolkata & Mumbai.
- Last mile rail and road connectivity projects
- Proposal of Major rail connectivity projects
- Development of Multi-Modal Logistics

### 1.1.3 Port-led industrialisation

E.g., Port-industry connectivity, setting up industrial estates in port land, Infrastructure development and maintenance projects in the industrial area/estate near the ports, Industrial clusters, Coastal Economic Zones, Coastal Economic Units China leads India by a factor of seven times to 16 times on the measured parameters.



#### **1.1.4 Ship building, ship repair & ship recycling**

- 1, facilities for ship building.
- 2, planning enclosures where ships are built or repaired.
- 3, ships altering works
- 4, Improving usage of barges for carrying heavy loads, especially on canals & rivers.
- 5, some smaller shipyards only perform ship repair works, so that can be established to ship build.
- 6, places for dry docks, berthing positions, workshops,
- 7, Incorporating larger landing place for bigger ships & to tie larger boats.

8, construction of larger buildings where raw materials are stored (ware house)



### 1.1.5 Off-shore Renewable energy projects with base ports for installation

Renewable energy projects for the sustainable development of the ports and the associated coastal regions. E.g., Solar and wind energy generation projects

With its long coastline, India has great potential for development for the sustainable and renewable energy source and Indian government has priority to attractive investment area. The power generation can be important activity in the coastal area.

### 1.1.4 Coastal Community development

Eg: Skill development, Coastal Tourism, Fisheries.

In spite of having a good natural resources in India like in the form of rivers, canals, and backwaters. We fail to utilize fully for cargo transportation by water ways.

As compared to developed & developing countries India has a contribution of about 6% in waterways which is much more.

We evaluate by 2025 the coastal shipping traffic of about 200 Million Metric Tonne Per Annum from coal, cement, iron and steel, food grains, fertilizers, POL .This would be evaluated around 14,000 crore annually.



The dedicated facilities improvement of coastal shipping will promote long way shipping transportation. Hence infrastructure at ports and supporting infrastructure using rail/road and waterways to facilitate coastal movement are being created.

Inland waterways are more price effective as well as eco friendly means of transporting cargo. The price estimation of transporting coal through coastal shipping is one-sixth of the price of transporting it by other modes like road/rail.

This not only reduce the logistic price but also reduces CO<sub>2</sub> Emissions, reduces fuel consumption, green house effect reduced, ozone depletion is reduced. The land temperature is maintained. The traffic waves on road can be reduced.

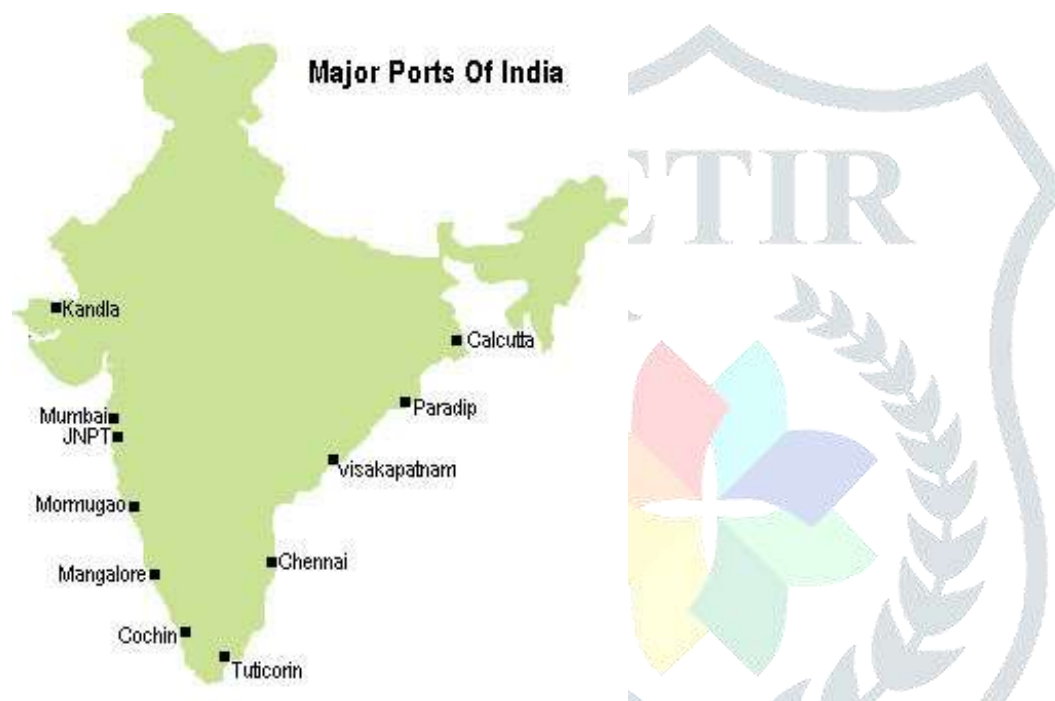
### 1.1.5 Coastal Shipping & Its Opportunity

1. Compared to other mode of transport like road & rail if cost value INR 2 Approximately then coast for coastal shipping is INR 0.18 tonne per Km.
2. The bulk cargo transportation will be remarkable cost effective since the price of logistic is estimated to be lower around INR 25,000 Crore by 2025



3. For coastal industrial group, coastal shipping will accelerate a lot.
4. As compared to roads/rails the inland logistic cost reduces a vast.
5. Improves production activities in remote areas.
6. It is evaluated those 4 waterways currently under development: Ganga, Brahmaputra, Mahanadi, Buckingham Canal.

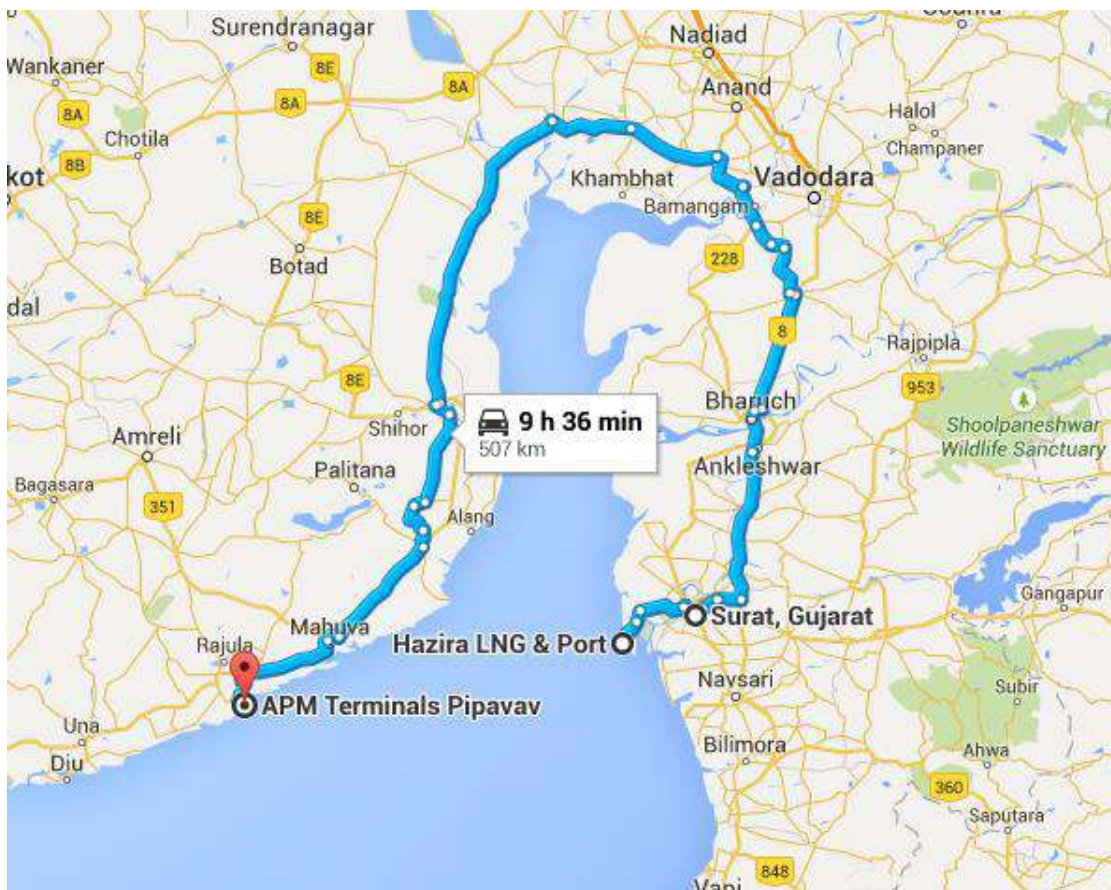
## 2. MAJOR PORTS OF INDIA



## 3. SOME OF THE IMPORTANT SOCIO-ECONOMIC BENEFITS OF PORTS

- **Fuels Economic development** - They are important links of hinterlands to points overseas. They facilitate movement of goods to and from hinterland. They increase international trade (both exports and import). Increase in exports lead to industrialization in the hinterland as well as around ports. Increase in imports lead to increase in consumer choice and provision of goods at competitive rates.

**Example: Road & Coastal Shipping Connectivity from Surat to Pipavav Port**



- **Development of cities** - Most of the world's major cities are port cities. Ports spur the economic activities around them like banking, finance, Insurance, logistic etc. This lead to development of cities around ports. For Example – Mumbai and Kolkata.
- **Increase in Employment** - Ports increase employment both directly and indirectly. Direct employment refers to employment in port related activities. Due to increased industrialization and increase in other services like banking and insurance there is opportunity of indirect employment.
- **Eco-friendly** - When compared to other transportation systems, railway transportation requires twice as much energy consumption, while road transportation requires ten times as much as sea conveyance. During the past few decades the world has become increasingly environmentally conscious and, with its lower energy consumption, marine transportation is obviously more environmentally friendly than other means.
- **Increase world Economic Integration** – Globalization has been partially successful due to cheap transportation facilitated by ports.

• **Development of Infrastructure** – Increase the economic activity between hinterland and ports lead to development of infrastructure including railways, roads & inland waterways. Such infrastructure makes our exports more competitive and as a spillover effect provide world class infrastructure to citizens.



1. port Modernization
2. New Port Development
3. Remote area connectivity
4. Inland Waterways
5. International Shipping
6. Coastal Shipping
7. Repairing of ships

8. Port-Led Industrialization
9. Tourism for light house

**Maritime Sector1: India vs. China**

Maritime Sector1:	India	vs.	China
Traffic for the container (Mn TEU)	10		155
counting of ports in Global top 20	0		90
Figure of shipyards	7		70
Contribution of waterways in domestic transportation	2%		25%
Average Turn-around time	4.5		1

## CONCLUSION

Sagarmala, integrated with the development of inland waterways, is expected to reduce cost and time for transporting goods, benefiting industries and export/import, Increase the volume of trade through inland waterways and coastal shipping, Develop maritime and manufacturing clusters around the ports – Develop 2–3 port-based smart cities and Coastal Economic Zones, Set up Sagarmala Development Company to enable project implementation. The capital dredging will help in better navigation of large vessels.

The effective multi – modal transportation has high potential to the country coastal shipping for its internal cargo movement along 7500Kms long coastline .The national view point plan of this project will save a huge amount of 21000 crore approximately for the commodities like coal, cement, iron, steel ,grains ,fertilizer by 2025.

The main aim of Sagarmala project is holistic port development infrastructure in the coastal region of India. Sagarmala project develop, modernized, Mechanize and computerize the new ports and port cities region in the coastal area. This project will create 40 lakh new direct jobs and 60 lakh indirect jobs and will mobilize investment. Due to increased industrialization and increase in other services like banking and insurance there is

opportunity of indirect employment. It is essential that the scheme is put into action in order to gauge the benefiting sector, company & the people.

## References

- 1, *MARITIME INDIA SUMMIT 2016, Anchored for Growth, 14 – 16 April, 2016(PPT)*  
[www.maritimeinvest.in](http://www.maritimeinvest.in)
- 2, *RECENT REFORMS IN THE PORT SECTOR 3<sup>rd</sup> February, 2017 Rajat Sachar Adviser (E) Ministry of Shipping (PPT)*
- 3, *FINAL REPORT FOR SAGARMALA (VOL. I) Ministry of Shipping, Indian Ports Association November 2016.*
- 4, *Sagarmala Project, State-Level Meeting, Ministry of Shipping.*
- 5, *Report on government imperatives including financing plan –Indian ports Association, Ministry of shipping.*
- 6, *“Press information Bureau Government of India Minister of Shipping.” Dec. 2016.*
- 8,. *“India’s Port-led Development Program Sagarmala Project”. Current Affairs August 2016.*
9. *“Sagarmala project.” General Knowledge Today. November 2016.*
10. *“Sagarmala project to saving 35000 cr. For India” B2B New Delhi Oct.2016.*
11. <http://sagarmala.gov.in/project/project-Tracker?>
12. *Www. Sagarmala.com*