18

TRANSPORT POLICIES IN INDIA

Notes

Indian Railways have prepared a National Rail Plan (NRP) for India – 2030, aimed to formulate strategies based on both operational capacities and commercial policy initiatives to increase modal share of the Railways in freight and sustain it. The objective of the Plan is to create capacity ahead of demand, which in turn would also cater to future growth in demand. Sagarmala Programme is another flagship schemes of Government of India along with Bharatmala Pariyojana to enhance the logistics sector by building new mega ports, and connecting waterways to coastline. The Sagarmala Project aims to harness the 7500 km long coastline of the country; boost infrastructure for transporting goods to and from ports quickly, efficiently, and cost-effectively; construction of elevated corridors, bypasses, ring roads, lane expansion, and logistics parks at identified points, etc. The PM Gati Shakti Mission is to expedite all the above projects and schemes. We will learn about all these projects and programmes in this lesson.

LEARNING OUTCOMES

After reading this lesson the learner-

- explains the new policies to enhance the transportation services in India;
- explains the significant features of Bharatmala project;
- relates the benefits of Sagarmala to multimodal connectivity in movement of goods;
- enumerates the features of the National Rail Plan to boost cargo transportation;
- emphasises the importance of the Gati-Shakti Mission.

18.1 BHARATMALA PARIYOJANA

The development of any nation depends on the transportation networks and the ways in which they are being maintained. The same holds true for the development of a huge and populous nation like India. For connecting the areas and maintaining smooth flow of traffic, the construction of new and developed roads are a must. The same will be achieved with the implementation of the Bharatmala project. Under the scheme, a host of new roads will be laid down in the nation.

Bharatmala Pariyojana is a new umbrella program for the highways sector that focuses on optimizing efficiency of freight and passenger movement across the country. This is being done by bridging critical infrastructure gaps through effective interventions like development of economic corridors, inter corridors and feeder routes, national corridor efficiency improvement, border and international connectivity roads, coastal and port connectivity roads and green-field expressways.

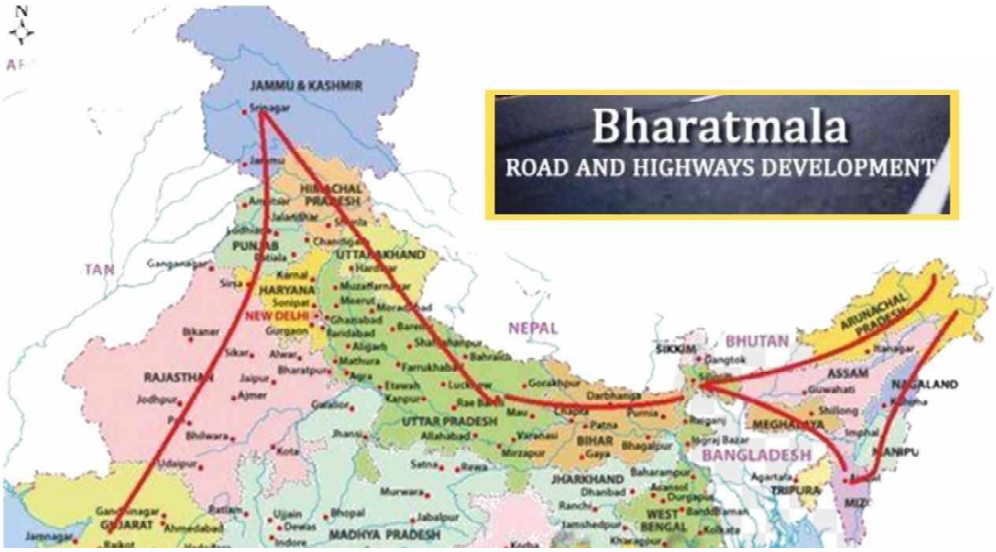


Fig. 18.1: Bharatmala

Activity: Find out about the development of any expressway and its status in your area.

Highlights of Bharatmala Pariyojana

- Improvement in efficiency of existing corridors through development of Multimodal Logistics Parks and elimination of choke point
- Enhance focus on improving connectivity in North East and leveraging synergies with inland waterways
- Emphasis on use of technology & scientific planning for project preparation and asset monitoring

- Delegation of powers to expedite project delivery

Key Features Of The Scheme

- **Improving the quality of roads** - The launch of the scheme has been done for bring a new wave of development in the nation in the form of well-maintained and developed roads. Under this project, the construction of roads, in all parts of the nation will be undertaken.
- **Total road construction** - As per the draft of the scheme, government and the ministry will strive to complete new roads, which will add up to 34, 800 kms.
- **Integrated scheme** - The Bharatmala is the name that is given to the road development and it will include many other related schemes as well. With the completion of all the schemes, the overall success of the scheme will be guaranteed.
- **Total tenure of the program** -The central government has the plans of finishing the scheme within a span of five years. Thus, all is set for finishing the first phase before the end of 2022.
- **Segmentation in phases** - Due to the sheer magnitude and spread of the scheme, it will be divided into seven distinct phases. As of now, the first phase in under construction.
- **Construction on a daily basis** - To finish the first phase in time, the respective department has made efforts of constructing at least 18 km of path on a daily basis. To beat the clock, continued efforts are being made to raise it to 30 km day.
- **Different categories of road construction** - It has been highlighted in the official draft of the scheme that to provide better connectivity, the construction of various categories of roads will be undertaken.
- **Multi-source of finding** - One source will not be enough for funding a mammoth project. Thus, the government will have to depend on other sources for generating adequate money to meet the expenses.

INTEXT QUESTIONS 18.1

1. Bring out the key features of the Bharatmala pariyojna of India.
2. What are the main reasons for launching the Bharatmala project?
3. What will Bharatmala project help to develop in India?

18.2 BHARATMALA PROJECT CATEGORY

- **Economic Corridor** - As per the guidelines of the road construction project, the construction of 9000 kms of economic corridors will be undertaken by the central government.
- **Feeder Route or Inter Corridor** - The total length of the roads which fall under the Feeder Route or Inter Corridor category is 6000kms.
- **National Corridor Efficiency Improvement** – 5000 kms of roads constructed under the scheme will fall in the category of National Corridor for the better connection between roads.
- **Border Road and International Connectivity** - Connecting the cities and remote areas which are situated in the border regions, the project has kept provision for constructing 2000 km roads that fall in the Border Road or International Connectivity category.
- **Port Connectivity and Coastal Road** - To connect the areas that are dotted along the shorelines and important ports the central government has ordered the construction of 2000 km of roads.
- **Green Field Expressway** - The main stress will be given on the construction and development of Green Field Expressway for better management of traffic and freight.
- **Balance NHDP Works** - Under the last segment, the project will see a construction and maintenance of about 10,000 km of new roads.

Network of about 42,000 km of economic corridors, inter-corridor and feeder routes identified

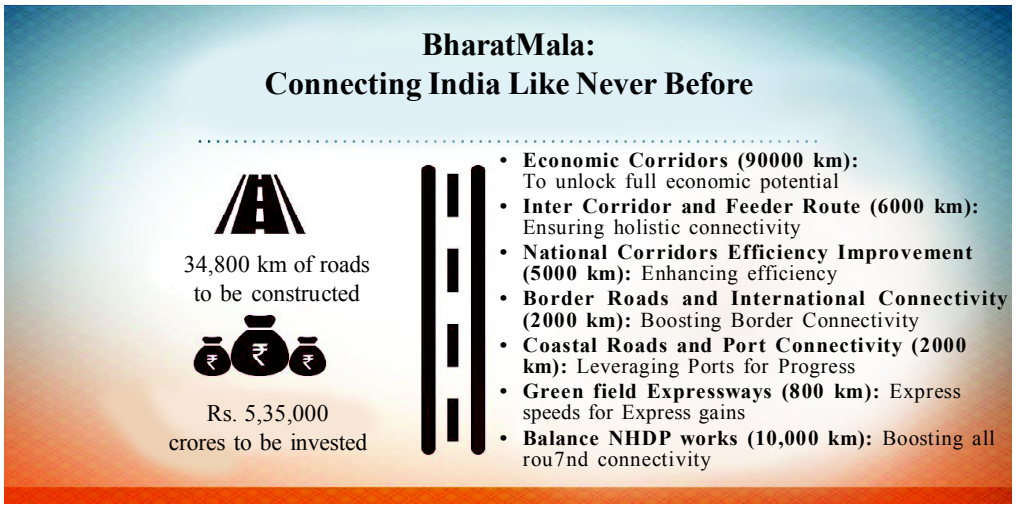


Fig. 18.2: Features of Bharatmala

18.3 THE SAGARMALA PROJECT

Sagarmala Programme is large transport and logistics project in India. It entails Rs. 8.5 trillion (US$120 billion or €100 billion) investment for setting up of new mega ports, modernization of India's existing ports, development of 14 Coastal Employment Zones (CEZs) and Coastal Employment Units. It envisages enhancement of port connectivity via road, rail, multi-modal logistics parks, pipelines & waterways and promotion of coastal community development. It shall result in boosting merchandise exports by US$110 billion, and generation of around 10,000,000 direct and indirect jobs.

The Sagarmala Programme is the flagship programme of the Ministry of Shipping. The aim is to promote port-led development in the country through harnessing India's 7,500 km long coastline, 14,500 km of potentially navigable waterways and strategic locations on key international maritime trade routes. Sagarmala aims to modernize India's ports so that port-led development can be augmented, "transforming" the existing ports into modern world class ports. It seeks to integrate the development of the ports, the industrial clusters and hinterland and efficient evacuation systems through road, rail, inland and coastal waterways resulting in ports becoming the drivers of economic activity.

Fig. 18.3: The Sagarmala Project

Components of Sagarmala Programme are:

- Port modernization & new port development: De-bottlenecking and capacity expansion of existing ports and development of new greenfield ports
- Port connectivity enhancement: Enhancing the connectivity of the ports to the hinterland, optimizing cost and time of cargo movement through multi-modal logistics solutions including domestic waterways (inland water transport and coastal shipping)
- Port-linked industrialization: Developing port-proximate industrial clusters and Coastal Economic Zones to reduce logistics cost and time of EXIM and domestic cargo
- Coastal Community Development: Promoting sustainable development of coastal communities through skill development & livelihood generation activities, fisheries development, coastal tourism etc.

Background

Maritime sector in India has been the backbone of the country's trade and has grown manifold over the years. Sagarmala Programme aims to promote port-led development in the country.

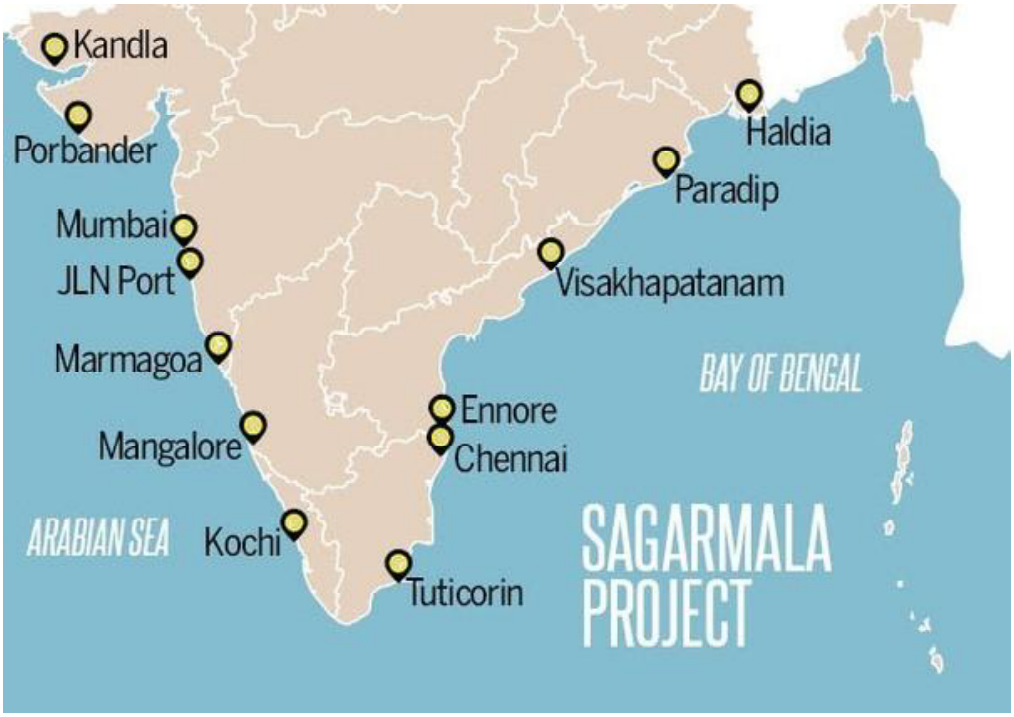


Fig. 18.4: Major ports in India

18.4 NEED FOR PORT-LED DEVELOPMENT IN INDIA

India is one of the fastest growing large economies in the world with a GDP growth rate of 7.5% in 2015-16. Ports play an important role in the overall economic development of the country. Approximately 95 % of India's merchandise trade (by volume) passes through sea ports. Many ports in India are evolving into specialized centres of economic activities and services and are vital to sustain future economic growth of the country such as JNPT, Mundra Port, Sikka Port, Hazira Port etc.

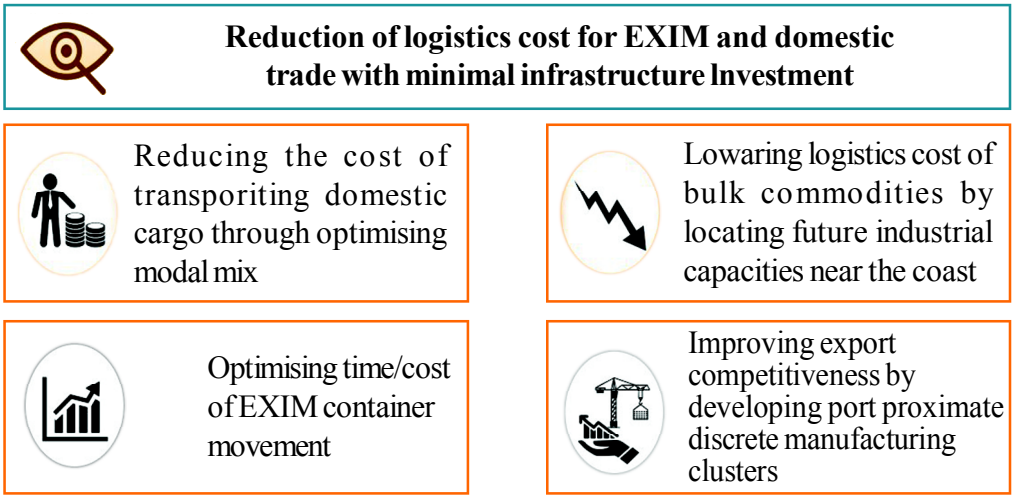


Fig. 18.5: Reduction of logistics cost

However, Indian ports still have to address infrastructural and operational challenges before they graduate to the next level. For example - Turnaround time (TAT) at major ports was approximately 4 days in 2014-15, whereas global average benchmark is 1-2 days. Some of the private sector ports in India like Mundra and Gangavaram, have been able to achieve a turnaround time of around 2 days.

Secondly, last mile connectivity to the ports is one of the major constraints in smooth movement of cargo to/from the hinterland. Around 87% of Indian freight uses either road or rail for transportation of goods. Although water-borne transport is much safer, cheaper and cleaner compared to other modes of transportation, it accounts for less than 6% of India's modal split. By comparison, coastal and inland water transportation contribute to 47% of China's freight modal mix, while in Japan and US, this share is 34% and 12.4% respectively.

The third factor is the location of industries / manufacturing centres vis-à-vis the ports. While cost differential between India and China is not significant on a per tonne km basis, China still has a lower container exporting cost than the cost in India, due to lower lead distances. Presence of major manufacturing and industrial zones in coastal

regions in China, which were developed as part of the Port-Led Policy of the government is the main reason for lower lead distances.

INTEXT QUESTIONS 18.2

1. What is the aim of launching the Sagarmala project?
2. What is the need for port led development?
3. What is Sagarmala?

18.5 THE FOUR PILLARS OF SAGARMALA

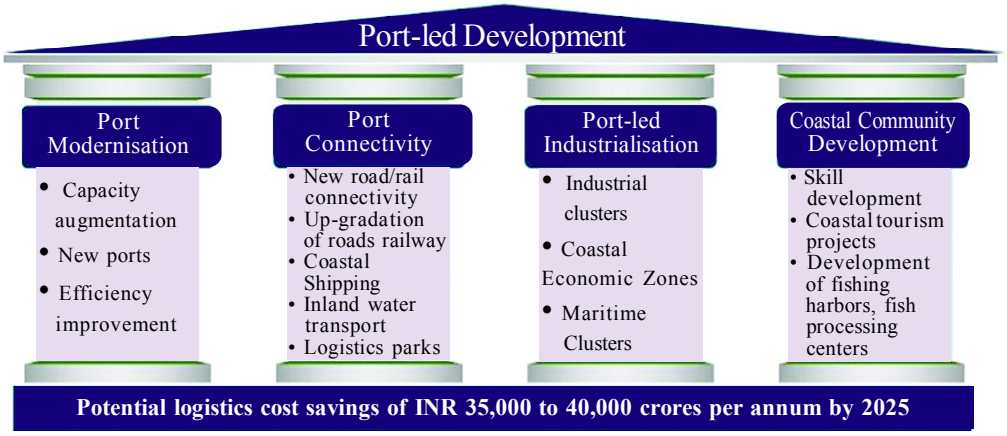


Fig. 18.6: Sagarmala Programme

1. **Port Connectivity Enhancement:** Connectivity is one of the critical enablers for ports and the end-to-end effectiveness of the logistics system and drives competitiveness for the maritime industry as well. With infusion of new technology and capacity building, the cumulative/ total capacity available at ports can match demand but will not be able to handle additional traffic if the evacuation to and from the port is restricted. It is, therefore, important that connectivity of major ports with the hinterland is augmented. This will not only ensure smooth flow of traffic at the present level but also meet the requirements of projected increase in traffic.

   India's hinterland connectivity is mainly based on surface transport i.e. road and rail, wherein, domestic waterways (coastal shipping and inland waterways) play a very limited role. Pipelines are predominantly used only for transporting crude oil, refined petroleum products and natural gas. Some of the types of connectivity projects are listed below -

- Coastal berths at various major and non-major ports
- National waterways prioritized for development in the first phase
- Heavy haul rail corridor from Talcher to Paradip
- Connectivity to dedicated freight corridors
- Last mile rail and road connectivity projects
- Major rail connectivity projects
- Freight friendly Expressway projects connecting the major ports
- Development of Multi-Modal Logistics Parks
- POL Pipelines
- Coastal Shipping &Inland Waterways to be enhanced to carry coal, cement, iron and steel, food grains, fertilizers, POL by 2025 to the tune of about 60-70 MMTPA.

2. **Port-led Industrialization:** Vision of the Sagarmala Programme is to reduce logistics cost and time for the movement of EXIM and domestic cargo. Development of port-proximate industrial capacities near the coast, in future, is a step in this direction. In this regard, the concepts of Coastal Economic Zones (CEZs), Coastal Economic Units (CEUs), Port-Linked Industrial & Maritime Clusters, and Smart Industrial Port Cities have been introduced.

- Coastal Economic Zones (CEZs): CEZs could be spatial economic regions comprising of a group of coastal districts or districts with a strong linkage to the ports in that region. CEZs are also envisaged to tap synergies with the planned industrial corridor projects.
- Coastal Economic Units (CEUs): CEUs will be specific industrial estate projects with a demarcated boundary similar to the DMIC nodes. The CEUs will house the industrial clusters / projects proposed within the CEZ.
- Each CEZ will consist of multiple CEUs and more than one industrial cluster can be housed within a CEU. Within each industrial cluster there can be several manufacturing units. To accelerate the CEU development process, it is proposed that CEUs be prioritized in locations where land parcels are available in areas close to a deep draught port and with strong potential for manufacturing.

INTEXT QUESTIONS 18.3

1. What are the four pillars of Sagarmala?
2. Explain coastal economic zones.
3. What is port led industrialization?

18.6 NATIONAL RAIL PLAN (NRP)

National Rail Plan Vision 2030

The NRP is formulated to develop strategies to enhance the modal share of the Indian Railways share in freight movement from a mere 25% to 45% by bringing changes both in operational capacities and commercial policies.

Plan Objectives:

- To create capacity ahead of demand, which in turn would also cater to future growth in demand right up to 2050. This will increase the modal share as well as continue to sustain it.
- Reduce transit time of freight substantially by increasing average speed of freight trains to 50Kmph.
- Vision 2024 has been launched for accelerated implementation of certain critical projects by 2024 such as –

a) 100% electrification, multi-tracking of congested routes,

b) upgradation of speed to 160 kmph on Delhi-Howrah and Delhi-Mumbai routes,

c) upgradation of speed to 130kmph on all other Golden Quadrilateral-Golden Diagonal (GQ/GD) routes, and

d) elimination of all Level Crossings on all GQ/GD route.

e) Identify new Dedicated Freight Corridors (DFC).

f) Identify new High Speed Rail Corridors.

g) Assess rolling stock requirement for passenger traffic as well as wagon requirement for freight.

h) Assess Locomotive requirement to meet twin objectives of 100% electrification (Green Energy) and increasing freight modal share.

i) Assess the total investment in capital that would be required along with a periodical break up.

j) Sustained involvement of the Private Sector in areas like operations and ownership of rolling stock, development of freight and passenger terminals, development/operations of track infrastructure etc.

k) To provide an overall long term rail development plan

l) Passenger and Freight Demand Forecast yearly till 2030 and for 10-year period for 2041 & 2051

m) To study the rail infrastructure deficiencies - Future Infrastructure requirements- Fixed and Rolling Stock, considering the demand forecast and its implication on congested network

n) Identifications of Options, Evaluation and Prioritization of projects

o) Assessment of funding requirements and financing strategies

p) Other issues like –

- In 2018-19, as per the NRP, India's operating ratio (OR) was 0.59 for freight and 1.92 for passenger traffic. The operating ratio shows the efficiency of a company's management by comparing the total operating expense of a company to net sales.

  An operating ratio that is decreasing is viewed as a positive sign, as it indicates that operating expenses are becoming an increasingly smaller percentage of net sales.

  OR = *(Operating Expenses + Cost of Goods Sold)*/ Net sales

- The problem is low passenger fares and artificially high freight rates required to cross-subsidise those.

- This is not the complete picture since normally, freight and passenger trains share common sections of track and passenger trains are given preference over goods trains in getting a path (route from point A to point B).

- Therefore, the average speed of a freight train is 24 km/hour — average speed is a surrogate indicator.

- A superior indicator is transit time — the time taken for a consignment to reach from one point to another.

Need for decreasing the cost and increasing the average speed

a) Indian Railways has a system of HDN and HUN identification for the present network.

b) HDNs are high-density routes.

c) HUNs are highly-used networks with multiple origins and destinations and no clear single haul corridor.

d) HUNs are primarily for passengers.

e) For freight, HDNs are important.

f) HDNs and HUNs carry 80 per cent of the traffic and there are sections where capacity utilisation is more than 100 per cent.

g) With traffic increasing, capacity utilisation will worsen.

h) If the intention is to increase rail share in the total freight carried to 44 per cent, the average speed must increase and costs must decline.

i) With the Western and Eastern DFCs, both should happen.

18.7 FOCUS AREAS FOR NATIONAL RAIL PLAN 2030

- Policy and Regulatory updates in Indian Railways
- Effective means for enhancing efficiency & safety in Indian Railways
- State of the Art Technology and Joint Ventures
- Participative Models of Rail Connectivity
- Strategies to leverage private capital in Railways
- Capacity Augmentation and Infrastructural capacity
- It will be a common platform for all future infrastructural, business and financial planning of the Railways.
- For successful implementation of the National Rail Plan, the Railways will be looking to engage with Private Sector, PSUs, State Governments and Original Equipment Manufacturers (OEM)/Industries.

- The NRP is meant to increase the share of railways in freight.
- Forecast growth of traffic in both freight and passenger year on year up to 2030 and on a decadal basis up to 2050.
- Formulate strategies for reducing carbon emission - Net Zero Carbon emission by 2030.
- Reduce transit time of freight substantially by increasing average speed of freight trains from present 22Kmph to 50Kmph. Three Dedicated Freight Corridors and several High Speed Corridors have been identified.
- Reduce overall cost of Rail transportation by nearly 30% and pass on the benefits to the customers.
- Map the growth in demand on the Indian Railway route map and simulate the capacity behaviour of the network in future.
- Assess Locomotive requirement to meet twin objectives of 100% electrification (Green Energy) by December 2023 and also the increasing traffic right up to 2030 and beyond up to 2050.

All the steps mentioned above will create a future-ready railways system and bring down the logistic cost for industry to enable Make in India.

INTEXT QUESTIONS 18.4

1. Write down the focus areas of the NRP.
2. How will IR reach net zero carbon emission?
3. What are the solutions for decreasing costs on IR?

18.8 PM GATI SHAKTI MISSION

The Government of India's ambitious Gati Shakti scheme or National Master Plan for multi-modal connectivity aims for coordinated planning and execution of infrastructure projects to bring down logistics costs. It is essentially a digital platform to bring 16 Ministries including Railways and Roadways together for integrated planning and coordinated implementation of infrastructure connectivity projects. The multi-modal connectivity will provide integrated and seamless connectivity for movement of people, goods and services from one mode of transport to another. It will facilitate the last mile connectivity of infrastructure and also reduce travel time for people.

PM Gati Shakti will incorporate the infrastructure schemes of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN etc. Economic Zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, agri zones will be covered to improve connectivity and make Indian businesses more competitive. It will also leverage technology extensively including spatial planning tools with ISRO (Indian Space Research Organisation) imagery developed by BISAG-N (Bhaskaracharya National Institute for Space Applications and Geoinformatics).

6 Pillars Of PM Gati Shakti

PM Gati Shakti is based on six pillars-

- **Comprehensiveness**: It will include all the existing and planned initiatives of various Ministries and Departments with one centralized portal. Each and every Department will now have visibility of each other's activities providing critical data while planning and execution of projects in a comprehensive manner.
- **Prioritization**: Through this, different Departments will be able to prioritize their projects through cross-sectoral interactions.
- **Optimization**: The National Master Plan will assist different ministries in planning for projects after identification of critical gaps. The plan will help in selecting the most optimum route in terms of time and cost for the transportation of the goods from one place to another.
- **Synchronization**: Individual Ministries and Departments often work in silos. There is lack of coordination in planning and implementation of the project resulting in delays. PM Gati Shakti will help in synchronizing the activities of each department, as well as of different layers of governance, in a holistic manner by ensuring coordination of work between them.
- **Analytical**: The plan will provide the entire data at one place with GIS based spatial planning and analytical tools having 200+ layers, enabling better visibility to the executing agency.
- **Dynamic**: All Ministries and Departments will now be able to visualize, review and monitor the progress of cross-sectoral projects through the GIS platform. The satellite imagery will give on-ground progress periodically. Progress of the projects will be updated on a regular basis on the portal. It will help in identifying the vital interventions for enhancing and updating the master plan.

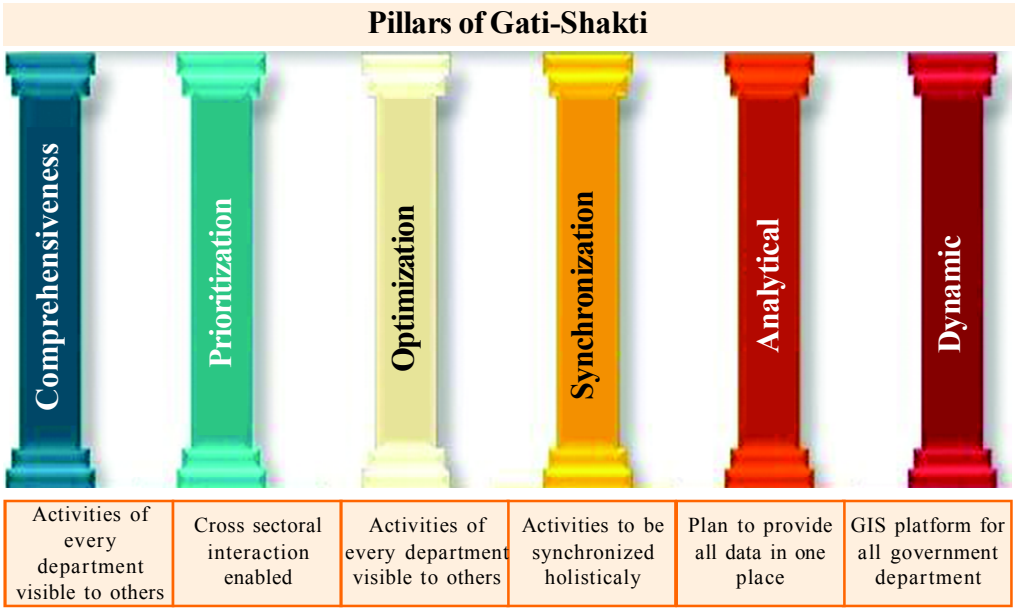


Fig. 18.7: Pillars of Gati Shakti

An Integrated Approach: It intends to bring together 16 infrastructure related Ministries, which will help in removing long-standing issues such as disjointed planning, lack of standardisation, problems with clearances, and timely creation and utilisation of infrastructure capacities.

Gati Shakti Digital Platform: It involves the creation of a common umbrella platform through which infrastructure projects can be planned and implemented in an efficacious manner by way of coordination between various ministries/departments on a real-time basis.

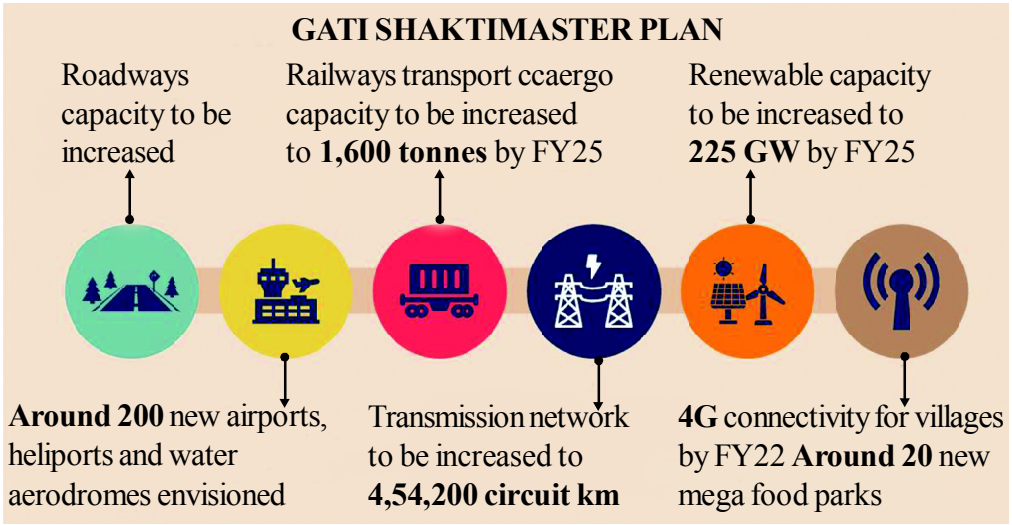


Fig. 18.8: Targets of Gati Shakti

Expected Outcomes of Gati Shakti

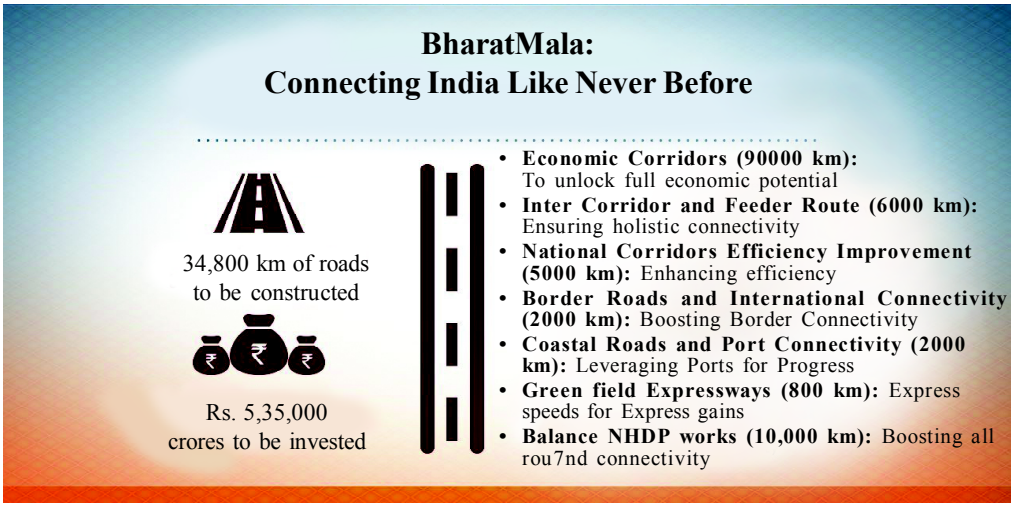
Gati Shakti envisages shaping India into the business capital of the world by-

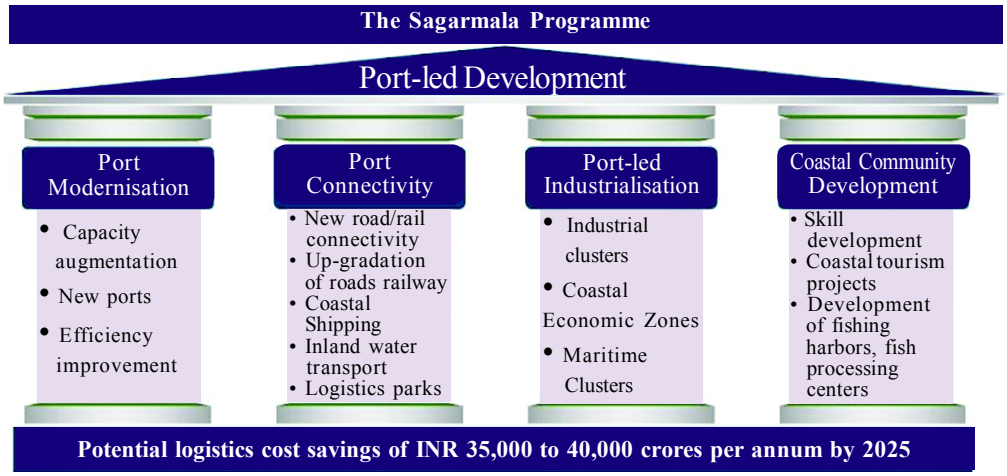
- mapping the existing and proposed connectivity projects;
- supporting 'Make in India' through a comprehensive and integrated transport connectivity strategy;
- achieving the various objectives of the government of India such as expanding the length of the national highway network to 2 lakh km, the creation of heliports and water aerodromes, and the development of over 200 new airports;
- boosting trade by enhancing the cargo handling capacity and decreasing the turnaround time at Indian ports;
- establishing 11 industrial corridors and two defence corridors;
- extending 4G connectivity to all the villages of the country;
- expansion of the gas pipeline network;
- providing last mile connectivity by linking different regions and industrial hubs in the country.

INTEXT QUESTIONS 18.4

1. What is the aim of the PM Gati-shakti mission?
2. What is the idea for formulating the Gati-shakti?
3. Gati-shakti is an umbrella body. Explain.

WHAT YOU HAVE LEARNT





TERMINAL EXERCISE

1. How does the Bharatmala pariyojna bring about efficient connectivity by roads for ease of movement of men and material?
2. How does the Sagarmala project lead to development of ports and coastal regions?
3. What are the objectives and focus areas of the NRP?
4. Discuss in detail the significance of the PM Gati-shakti Mission.

ANSWERS TO INTEXT QUESTIONS

18.1

A1. Key Features Of The Bharatmala Pariyojna:

- Improving the quality of roads; Total road construction
- Integrated scheme
- Total tenure of the program
- Segmentation in phases
- Constriction on a daily basis
- Different categories of road construction
- Multi-source of finding

A2. Highlights of Bharatmala Pariyojana

- Improvement in efficiency of existing corridors through development of Multimodal Logistics Parks and elimination of choke point
- Enhance focus on improving connectivity in North East and leveraging synergies with Inland Waterways
- Emphasis on use of technology & scientific planning for Project Preparation and Asset Monitoring
- Delegation of powers to expedite project delivery - Phase I to complete by 2022
- Improving connectivity in the North East

A3. Bharatmala Pariyojana is a new umbrella program for the highways sector that focuses on optimizing efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps through effective interventions like development of Economic Corridors, Inter Corridors and Feeder Routes, National Corridor Efficiency Improvement, Border and International connectivity roads, Coastal and Port connectivity roads and Green-field expressways.

18.2

A1. Sagarmala aims to modernize India's Ports so that port-led development can be augmented, "transforming" the existing Ports into modern world class Ports and integrate the development of the Ports, the Industrial clusters and hinterland and efficient evacuation systems through road, rail, inland and coastal waterways resulting in Ports becoming the drivers of economic activity

A2. India is one of the fastest growing large economies in the world with a GDP growth rate of 7.5% in 2015-16 and ports play an important role in the overall economic development of the country. Approximately 95 % of India's merchandise trade (by volume) passes through sea ports. Many ports in India are evolving into specialized centres of economic activities and services and are vital to sustain future economic growth of the country such as JNPT, Mundra Port, Sikka Port, Hazira Port etc.

A3. The Sagarmala Programme is the flagship programme of the Ministry of Shipping to promote port-led development in the country through harnessing India's 7,500

km long coastline, 14,500 km of potentially navigable waterways and strategic location on key international maritime trade routes. Sagarmala aims to modernize India's Ports so that port-led development can be augmented, "transforming" the existing Ports into modern world class Ports and integrate the development of the Ports, the Industrial clusters and hinterland and efficient evacuation systems through road, rail, inland and coastal waterways resulting in Ports becoming the drivers of economic activity

18.3

A1. The four pillars are –

- Port modernization
- Port Connectivity Enhancement
- Port industrialization
- Creation of coastal economic zones

A2. CEUs will be specific industrial estate projects with a demarcated boundary similar to the DMIC nodes. The CEUs will house the industrial clusters / projects proposed within the CEZ. Each CEZ will consist of multiple CEUs and more than one industrial cluster can be housed within a CEU. Within each industrial cluster there can be several manufacturing units. To accelerate the CEU development process, it is proposed that CEUs be prioritized in locations where land parcels are available in areas close to a deep draught port and with strong potential for manufacturing.

A3. Vision of the Sagarmala Programme is to reduce logistics cost and time for the movement of EXIM and domestic cargo. Development of port-proximate industrial capacities near the coast, in future, is a step in this direction. In this regard, the concepts of Coastal Economic Zones (CEZs), Coastal Economic Units (CEUs), Port-Linked Industrial & Maritime Clusters and Smart Industrial Port Cities have been introduced.

18.4

A1. Focus Areas for National Rail Plan 2030

- Policy and Regulatory updates in Indian Railways

- Effective means for enhancing efficiency & safety in Indian Railways
- State of the Art Technology and Joint Ventures
- Improve Rail Connectivity
- Strategies to leverage private capital in Railways
- Capacity Augmentation and Infrastructural capacity
- To engage with Private Sector
- To increase the share of railways in freight.
- Formulate strategies for reducing carbon
- Reduce transit time of freight trains
- Reduce overall cost of Rail transportation by nearly 30%
- Map the growth in demand
- 100% electrification (Green Energy) by December 2023

A2. Electrification, use of green energy, use of state of the art technology, carry larger freight traffic, operational efficiency, switch to eco-friendly solutions, bio-toilets, fuel efficiency.

A3. Need for decreasing the cost and increasing the average speed

a) Indian Railways has a system of HDN and HUN identification for the present network.

b) HDNs are high-density routes.

c) HUNs are highly-used networks with multiple origins and destinations and no clear single haul corridor.

d) HUNs are primarily for passengers.

e) For freight, HDNs are important.

f) HDNs and HUNs carry 80 per cent of the traffic and there are sections where capacity utilisation is more than 100 per cent.

Notes

g) With traffic increasing, capacity utilisation will worsen.

h) If the intention is to increase rail share in the total freight carried to 44 per cent, the average speed must increase and costs must decline.

i) With the Western and Eastern DFCs**,** both should happen.

18.5

A1. Aim: To ensure integrated planning and implementation of infrastructure projects in the next four years**,** with focus on expediting works on the ground, saving costs and creating jobs. To this effect -

- Besides cutting logistics costs, the scheme is also aimed **at** increasing cargo handling capacity and reducing the turnaround time at ports to boost trade.
- It also aims to have 11 industrial corridors and two new defence corridors
- Extending 4G connectivity to all villages
- Adding 17,000 kms to the gas pipeline network
- It will help in fulfilling the ambitious targets of expanding the length of the national highway network to 2 lakh kms, creation of more than 200 new airports

A2. The Government of India's ambitious Gati Shakti scheme **or** National Master Plan for multi-modal connectivity aims for coordinated planning and execution of infrastructure projects to bring down logistics costs.It is essentially a digital platform to bring 16 Ministries including Railways and Roadways together for integrated planning and coordinated implementation of infrastructure connectivity projects. The multi-modal connectivity will provide integrated and seamless connectivity for movement of people, goods and services from one mode of transport to another. It will facilitate the last mile connectivity of infrastructure and also reduce travel time for people.

A3. PM Gati Shakti will incorporate the infrastructure schemes of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN etc. Economic Zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, agri zones will be covered to improve connectivity & make Indian businesses more

competitive. It will also leverage technology extensively including spatial planning tools with ISRO (Indian Space Research Organisation) imagery developed by BiSAG-N (Bhaskaracharya National Institute for Space Applications and Geoinformatics).