



Grade 10

Subject- Geography

Lifelines of Indian economy

## Means of transport-

### **A. Roadways**

#### 1. How it is better than other modes of transport

- It helped to improve the accessibility in these areas of difficult terrain and have helped in the economic development of the area
- Construction cost of roads is much lower than that of railway lines
- Roads can traverse comparatively more dissected and undulating topography
- Roads can negotiate higher gradients of slopes and as such can traverse mountains such as the Himalayas
- It also provides door to door to service, thus loading and unloading is much lower
- Road transport is economical in transportation of few persons and relatively smaller amount of goods over short distances
- Road transport is also used as feeder to other modes of transport such as they provide a link between railway stations, air, sea ports.

#### 2. Golden Quadrilateral Super Highways

- Road linking – Delhi-Kolkata-Chennai-Mumbai
- Delhi will be linked by six superhighways
- North-South corridor- between Srinagar and Kanyakumari
- East-West corridor – between Silcher and Porbander
- To reduce time and distance between the mega cities of India
- Implemented by National Highway authority of India(NHAI)

#### 3. National Highway

- Links extreme parts of the country
- Primary road system and laid and maintained by the Central Public Works Department(CPWD)
- Sher Shah Suri Marg is called National Highway No.1 between Delhi and Amritsar

#### 4. State Highway

- Links state capital with different district headquarters
- Maintained by State Public Works Department(SPWD)

### 5. District roads

- Connects district headquarters with other places of the district
- Maintained by Zilla Parishad

### 6. Rural roads

- ✓ Connects rural areas and villages with towns
- ✓ These roads receives special impetus under Pradhana Mantri Grameen Sadak Yojna
- ✓ Special provision are made so that every village in the country is linked to a major town in the country by an all season motorable road

### 7. Border roads

- ✓ Border Roads Organisation a Government of India undertaking constructs and maintains roads in the bordering areas of the country
- ✓ The organisation was established by 1960 for the development of the roads of strategic importance in the northern and north-eastern borders

### 8. Problems

- Road network is still inadequate with respect to the volume of passengers and traffic
- Half of the roads are unmetalled
- National Highways are also inadequate
- Roadways are highly congested in cities
- The length of road per 100 sq km of area is known as density of roads
- Distribution of roads is not uniform in the country
- Density of roads varies from 10 km in J&K to 375 km in Kerala with national average of 75 km
- Bridges and culverts are old and narrow

## B. Railways

### 1. Importance

- ❖ Principal mode of transport – freight, passengers, business, sightseeing, pilgrimage
- ❖ A great integrating force, binds economically and accelerates the development of the industry and agriculture.
- ❖ A network of 7,031 stations spread over a route length of 63,221km. With a fleet of 7817 locomotives, 5321 passenger service vehicles, 4904 other coach vehicles and 228, 170 wagons as on 31 March 2004
- ❖ Largest public sector undertaking

## 2. Factors influencing distribution pattern

- Physiographic
- Economic,
- administrative factors
  - ✓ Example – The northern plains have most favourable conditions like vast level land, high population density and rich agricultural resources but large number of rivers posed a problem
  - ✓ Himalayan mountainous region were unfavourable because of high terrain, sparse population, lack of economic opportunities.
  - ✓ Another place with unfavourable circumstances were sandy plains of Rajasthan, swamps of Gujarat, forested tracks of Madhya Pradesh, Chhattisgarh, Orissa, Jharkhand

## 3. Problems

- ⊗ Though the development of Konkan railway facilitated the movement of passengers and goods in this most important economic region but it also faces problems such as sinking of track and landslides
- ⊗ Many passengers travel without tickets
- ⊗ Thefts and damaging of railway property
- ⊗ People stop the trains and pull the chain unnecessarily

## C. Pipelines

### 1. Features

- Used to transport petroleum products, crude oil and natural gas from oil and natural gas fields to refineries, fertilizer factories and big thermal power plants
- Solids can also be transported through pipeline by converting it into slurry
- Initial cost of laying is costly but subsequent running costs are minimal
- Rules out trans shipment losses or delays.

### 2. Important pipelines

- ✓ From upper Assam to Kanpur, via Guwahati, Barauni, Allahabad. It has branches from Barauni to haldia, via Rajbandh, Rajbandh to Maurigram and Guwahati to Siliguri
- ✓ From Salaya in Gujarat to Jalandhar via Viramgarh, Mathura, Delhi and Sonipat. It branches to connect Koyali, Chakshu and other places.
- ✓ Hazira to Jagdishpur in UP via Vijaipur in Madhya Pradesh. It has branches to Kota(Rajasthan), Shahjahanpur, Babrala and other places in UP

## D. Waterways

### 1. Importance

- ★ Cheapest means
- ★ Most suitable to carry heavy and bulky goods
- ★ Fuel efficient and environmental friendly.
- ★ Inland navigation of 14,500kms. Out of these 3700kms are navigable by mechanised boats

### 2. National waterways

NW. No.1 - The Ganga river between Allahabad and Haldia (1620 km)

NW.No.2 - The Brahmaputra river between Sadiya and Dhubri (891 km)

NW. No. 3 - The west coast canal in Kerala (Kottapurma-Komman, Udyogmandal and Champakkara canals – 205 km)

### 3. Sea Ports

- 12 major seaports and 181 medium seaports
- Handles 95 percent of India's foreign trade

Seaport	Location	Importance
Kandla	– Kutchh	<ul style="list-style-type: none"><li>• First port to be developed after independence to ease the volume of trade from Mumbai port</li><li>• Tidal port</li><li>• Caters to the convenient handling of highly productive granary and industrial belt stretching across J&amp;K, Himachal Pradesh, Punjab, Haryana, Rajasthan and Gujarat</li></ul>
Mumbai	Maharashtra	Biggest port with a spacious natural and well-sheltered harbour
Jawaharlal Nehru port	Maharashtra	was planned to decongest the Mumbai port and to serve as hub port for this region
Marmagao port	Goa	Premier iron ore exporting

		port of the country. Accounts for 50% of iron ore export
New Manglore port	Karnataka	– export of iron ore from Kudremukh mines
Kochi	Kerala	Located at the entrance of a lagoon with a natural harbour
Tuticorin	Tamil Nadu	Natural harbour and rich hinterland. Huge varieties of cargo to Sri Lanka, Maldives
Chennai	Tamil Nadu	One of the oldest artificial port. It ranks next to Mumbai port in terms of volume of cargo and trade
Vishakhapatnam	Andhra Pradesh	Deepest landlocked and well protected port. Originally conceived as an outlet for iron ore exports
Paradip	Orissa	export of iron ore
Kolkata	West Bengal	Inland riverine port. This serves as very large and rich hinterland of Ganga-Brahmaputra basin. Being a tidal port, it requires constant dredging of Hoogly.
Haldia	West Bengal	Developed as a subsidiary to relieve growing pressure on the Kolkata port

## **E. Airports**

- ✓ Fastest and most comfortable and prestigious mode of transport
- ✓ Cover very difficult terrains like mountains, dreary deserts, dense forests and also long oceanic stretches with great ease
- ✓ Air transport was nationalised in 1953
- ✓ Domestic services – Indian airlines, Alliance air, private scheduled airlines and non-scheduled airlines.
- ✓ International – Air India
- ✓ Pawanhans Helicopters provides helicopter services to Oil and Natural Gas services (ONGC) in its off shore operations, to inaccessible areas and difficult terrains like north-eastern states, interior parts of J&K, Himachal Pradesh, Uttaranchal
- ✓ Indian Airlines have extended their services to South and South-east Asia and the Middle East

**F. Communication** - Personal and mass communication includes – television, radio, press, films, etc.

## 1. Postal

- ◆ Indian Postal network is the largest in the world
- ◆ Handles parcels as well as personal written communications
- ◆ First class mails – cards and envelopes – are airlifted between stations covering both land and air
- ◆ Second class mail – book packets, registered newspaper, periodicals – are carried by surface mails, covering land and water
- ◆ To facilitate quick delivery, six mail channels have been introduced recently – Rajasthan channel, metro channel, Green channel, Business channel, Bulk channel, periodical channel

## 2. Telecom

- ✗ India has a largest telecom networks in Asia
- ✗ STD (subscriber trunk dialling) has been provided to every village 24 hours
- ✗ There is uniform charges of STD rates
- ✗ It has been made possible by integrating the development in space technology with communication technology

## 3. Mass Communication

- Radio, television, magazines, newspaper, books, films
- National organisation – All India Radio (Akashwani), Doordarshan (television)
- Newspaper published in over 100 languages
- Largest number of newspaper in Hindi, followed by English, Urdu
- India is largest producer of feature films . The Central Board of Film Certification is the national authority to certify Indian and foreign films

## G. International Trade

- ☞ The exchange of goods among people, states and countries is referred to as trade – it takes place in the market
- ☞ Local trade- Between villages cities, towns
- ☞ State trade – Between States
- ☞ International trade – Between countries
  - ✓ Exports includes which has increased – agriculture and allied products (2.53 %), ores and minerals (9.12%), gems and jewellery (26.75%), chemicals and allied products (24.45%), engineering goods (35%) and petroleum products(86.12%)
  - ✓ Imports include – Petroleum and its allied products ( 41.87%), pearls and precious stones (29.26%), inorganic chemicals (29.39%), coal, coke, and briquettes (94.17%), machinery (12.56%). Bulk imports as groups has increased like fertilizers, cereals, edible oils, newsprint.

- ✓ Exchange of commodities and goods have been superseded by exchange of information and knowledge.

## **H. Tourism**

- ❖ Foreign tourists' arrivals have increased by 23.5% during 2004, thus contributing Rs 21,828 crore of foreign exchange Tourism promotes national integration, provides support to local handicrafts and cultural pursuits.
- ❖ It helps in the development of international understanding about our culture and heritage.
- ❖ Rajasthan, Goa, Jammu and Kashmir and temple towns of South India are favorite among the tourists
- ❖ There is possibility of tourism in north-eastern states and interior parts of Himalayas but due to strategic reasons these have not been encouraged