

Transportation System of India – SSC Notes

1. Introduction

- **Transportation:** System of moving people & goods from one place to another
- **Importance:** Economic growth, trade, connectivity, defense

2. Modes of Transportation in India

A. Road Transport

- **Network:** ~6.3 million km (National, State & Rural roads)
- **Types of Roads:**
 - **National Highways (NH)** → Connect major cities & ports → ~1,42,500 km
 - **State Highways (SH)** → Connect district headquarters & towns
 - **Rural Roads** → PMGSY (Pradhan Mantri Gram Sadak Yojana)
- **Features:**
 - Flexible, door-to-door transport
 - Important for remote & hilly areas
- **Important Points:**
 - **Golden Quadrilateral** → Delhi-Mumbai-Chennai-Kolkata → 5846 km
 - **North-South & East-West Corridor** → 7200 km

B. Rail Transport

- **Indian Railways** → Backbone of Indian transport
- **Network:** ~123,000 km → 7th largest in world
- **Features:**
 - Economical, bulk transport of goods
 - Passenger & freight transport
- **Important Trains / Projects:**
 - **Rajdhani Express** → Fast, Delhi to major cities
 - **Shatabdi Express** → Day trains
 - **Freight corridors** → Dedicated freight movement
- **Zones** → 18 railway zones (like Northern, Southern, Eastern, Western, etc.)

C. Water Transport

1. Inland Waterways

- **Length:** ~14,500 km navigable
- **National Waterways:** NW-1 (Ganga-Bhagirathi-Hooghly), NW-2 (Brahmaputra), NW-3 (Bhubaneswar) etc.
- **Importance:** Cost-effective, bulk transport

2. Ports & Shipping

- Major Ports → Mumbai, Chennai, Kolkata, Kochi, Kandla
- Private Ports → JNPT, Mundra
- Shipping: Coastal & International trade

D. Air Transport

- Airports → 100+ operational, Domestic & International
- Major Hubs → Delhi, Mumbai, Bengaluru, Chennai, Hyderabad
- Airlines → Air India, Indigo, SpiceJet, GoAir, Vistara
- Importance: Fast movement of passengers & high-value goods

E. Pipelines

- For → Petroleum, Gas, Water
- Major Pipelines:
 - Barauni-Kanpur pipeline
 - Hazira-Vijaipur-Jagdishpur (HVJ) gas pipeline
- Importance: Safe, economical, avoids road/rail congestion

3. Features of Indian Transportation System

- Multi-modal → Road, Rail, Water, Air, Pipelines
- Rail → Bulk goods, cost-effective
- Road → Flexible, door-to-door
- Waterways → Energy-efficient, bulk cargo
- Air → Fastest, high-value goods
- Pipelines → Safe transport of liquids & gases

4. Government Initiatives

- PMGSY → Rural connectivity
- Sagarmala Project → Port-led development
- Bharatmala Project → Road infrastructure
- UDAN Scheme → Regional air connectivity
- Dedicated Freight Corridors → Faster goods transport
- Smart Cities Mission → Urban mobility

5. Important SSC Points

- Golden Quadrilateral → 5846 km → Delhi-Mumbai-Chennai-Kolkata
- North-South & East-West Corridor → 7200 km
- Major Inland Waterway → NW-1 (Ganga-Bhagirathi-Hooghly)
- Major Ports → Mumbai, Chennai, Kolkata, Kochi, Kandla
- Major Airports → Delhi, Mumbai, Bengaluru, Chennai, Hyderabad
- Railway network → 123,000 km → 7th largest
- Air transport → Fastest mode, connects remote & urban areas

