



Reforming Indian Railways

For Prelims:

[Comptroller and Auditor General \(CAG\)](#), [KAVACH](#), [Vande Bharat Train](#), [Hydrogen Train](#), [Dedicated Freight Corridors \(DFCs\)](#), [Extra-Budgetary Resources \(EBRs\)](#), [Mission Raftar](#), [Rashtriya Rail Sanraksha Kosh \(RRSK\)](#).

For Mains:

Significance of Railways for India, Issues related to Indian Railways and way forward.

[Source: TH](#)

Why in News?

The [Comptroller and Auditor General's \(CAG\)](#) audit report on the Ministry of Railways highlighted the various **concerns** in the functioning of Indian Railways.

What are Key Facts About Indian Railways?

- **About:** India has the **4th largest railway network** in the world, with over **65,000 km** of route length.
 - In 2022, Indian Railways carried **8 billion passengers**, **1.4 billion tons of freight**, and is expected to contribute to **40%** of global rail activity by **2050**.
- **Infrastructure Spending:** The government plans to invest **USD 750 billion by 2030**, as part of a broader **USD 1.4 trillion investment target (2019-2023)** in infrastructure.
 - **100% FDI allowed** in the railway sector, encouraging global participation.
- **Innovation:** [KAVACH](#), India's own [Train Collision Avoidance System](#), will be deployed over **37,000 km** of railway lines.
 - **15,000 km** of tracks will be converted into **automatic signaling zones**, enhancing safety and efficiency.
 - [Vande Bharat trains](#) feature quick acceleration, automatic doors, CCTV, **bio-toilets**, GPS info systems, and onboard infotainment.
- **Financial Performance:** In 2023-24, Indian Railways earned **USD 32.18 billion** in traffic revenue, **99.8%** of its total income, showing **strong efficiency** and public reliance.
- **Future Plans:**
 - **High-Speed Rail:** Mumbai-Ahmedabad [bullet train](#) and other semi-high speed trains.
 - **Signaling & Telecom:** Plans to upgrade around 15,000 km to **automatic signaling** and 37,000 km with **KAVACH**.
 - **Digitalization:** Railway puts emphasis on predictive maintenance, asset management, and **GPS info systems**.
 - **Intermodal Transport:** Integration of **rail, road, and ports** for smoother logistics.
- **Net Zero Carbon Emissions Target:** Indian Railways aims for **net zero carbon emissions by 2030**. As a start, it plans to run **35 hydrogen trains** under the **Hydrogen for Heritage** program.

What is the Significance of Indian Railways?

- **Lifeline for the Nation:** Indian Railways is the **backbone** of India's transport, providing **affordable, reliable** travel and boosting economic integration nationwide.
- **Industrial Expansion:** It enables the **transport of essential commodities** like coal, iron ore, cement, and agricultural products, ensuring **uninterrupted industrial operations**.
 - **Dedicated Freight Corridors (DFCs)** lowers logistics costs, making Indian manufacturing more **competitive** in the global market.
- **Employment:** With over **1.2 million employees**, it is the **9th-largest employer in the world**.
- **Regional Development:** Railways play a pivotal role in linking **rural regions** to urban markets, improving access to **education, healthcare, and jobs** in underdeveloped regions.
- **Green Transport:** The use of **energy-efficient locomotives, green bio-toilets, and electrified routes** reflects the commitment to **environmental responsibility**.
- **National Security:** **Strategic rail links in sensitive areas like the North-East** bolster national security and rapid mobilization.

What Concerns are Associated with Indian Railways?

- **High Operating Ratio:** The **operating ratio (OR)** for 2024-2025 is estimated at **Rs 98.2**—slightly better than **Rs 98.7 in 2023-2024**, but worse than **Rs 97.8 in 2016**.
 - A higher OR (amount **spent to earn Rs 100**) leaves **less resources for capex** and makes the Railways more dependent on **budgetary support and Extra-Budgetary Resources (EBRs)**.
- **Slow Infrastructure Development:** Among the DFCs (proposed in 2005), **only the eastern DFC** is fully **operational** and **western DFC** nears **completion**.
 - The **east coast, east-west, and north-south** sub-corridor DFC remain in the **planning stage**.
 - The Mumbai-Ahmedabad bullet train project has been **delayed from 2023 to 2028** due to land acquisition issues.
- **Inadequate Safety Technologies:** While Kavach can prevent collisions through automated braking and alerts, its **limited rollout** reduces its overall impact.
 - As of February 2024, it had been installed on only **1,465 route km**—just **2%** of the total railway network.
- **Slow Journeys:** Mail and express trains continue to run at an **average speed** of just **50-51 kmph**, falling short of the goals set under **Mission Raftar**.
 - Mission Raftar (2016-17 Budget) aims to **double freight train speeds** and raise **passenger train speeds by 25 kmph within 5 years**.

What Recommendations Have Various Committees Made to Improve Railways?

- **Rakesh Mohan Committee (2010):** Emphasized development of **long-distance and inter-city transport**, including **High-Speed Rail corridors**.
 - Establishment of **National Transport Infrastructure Finance**, ensuring **neutrality** regarding **mobility, sustainability, and inclusion goals**.
- **Kakodkar Committee (2012):** Called for establishing a **statutory Railway Safety Authority**.
 - Proposed a **non-lapsable Rashtriya Rail Sanraksha Kosh (RRSK)** of **Rs 1 lakh crore** over 5 years for safety-related projects.
- **Bibek Debroy Committee (2014):** Recommended creation of a **Railway Infrastructure Authority** as an **advisory body** to help the government make informed decisions on issues like promoting **competition, efficiency, and economy**.
 - Suggested **outsourcing of non-core activities** (e.g., schools, hospitals) to increase efficiency and reduce operational load on Indian Railways.

Way Forward

- **Broaden Freight Portfolio:** Focus should be on **specialized freight solutions** for high-value and sensitive commodities such as **pharmaceuticals, electronics, and perishable goods.**
- **High-Speed Railways:** Upgrading railway infrastructure to support speeds of **160-200 km/h** could significantly cut travel time, making rail a strong alternative to air travel on key intercity routes.
- **Multimodal Logistics Infrastructure:** Integrated **multimodal logistics parks** should be prioritized, featuring **automation**, smart inventory systems, and smooth **intermodal transfers** for higher efficiency.
- **Private Sector Participation:** Indian Railways should boost **private participation** in areas like **rolling stock, catering, and logistics.**
 - **Competitive bidding** on busy routes can raise efficiency and ease the government's burden.

Drishti Mains Question:

Q. Railways act as an engine for inclusive economic growth and regional development. Discuss.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Mains

Q. The setting up of a Rail Tariff Authority to regulate fares will subject the cash strapped Indian Railways to demand subsidy for the obligation to operate nonprofitable routes and services. Taking into account the experience in the power sector, discuss if the proposed reform is expected to benefit the consumers, the Indian Railways or the private container operators. (2014)

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