



## India's Ambitious Airport Expansion Plan

**For Prelims:** [Airports Authority of India](#), [UDAN Scheme](#), [Directorate General of Civil Aviation](#)

**For Mains:** Status of the Aviation Industry in India, Measures to Re-energize the Aviation Sector in India, [Vision 2047](#)

**Source:** [LM](#)

### Why in News?

India plans to double its number of **operational airports to 300 by 2047**, driven by an **eightfold increase in passenger traffic**. This ambitious expansion involves developing existing airstrips and constructing new airports across the country.

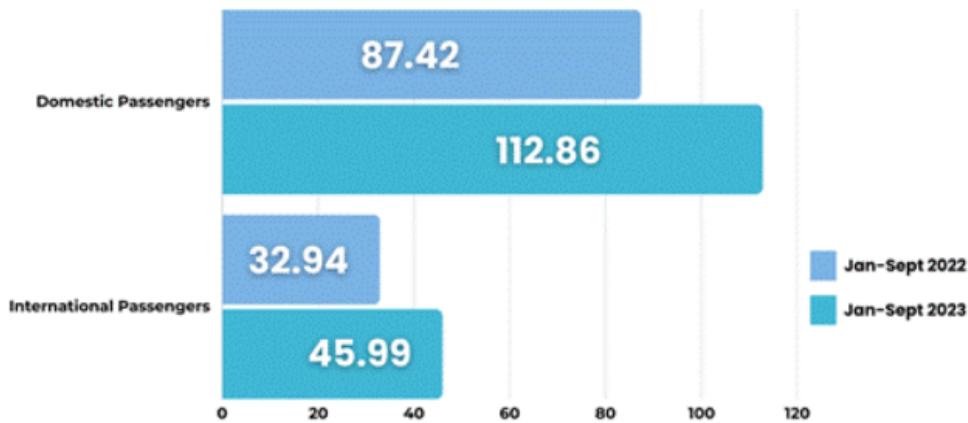
### What are the Factors Driving this Expansion?

- **Development of Existing Airstrips:** The [Airports Authority of India \(AAI\)](#) plans to develop **70 airstrips into airports capable of handling narrow-body aircraft like A320 or B737**.
  - **Existing airstrips** at Mandavi (Gujarat), Sultanpur (Uttar Pradesh), Tura (Meghalaya), and Chhindwara (Madhya Pradesh) can be upgraded for small aircraft. Nearly 40 airstrips are slated for development to accommodate smaller aircraft.
  - New airports will be built if existing airstrips cannot be developed or if there is no civilian airport within 50 km.
  - New **greenfield airports** may be constructed in Kota (Rajasthan), Parandur (Tamil Nadu), Kottayam (Kerala), Puri (Odisha), Purandar (Maharashtra), Car Nicobar, and Minicoy (Andaman and Nicobar Islands).
- **Projected Passenger Traffic Growth:** **Passenger traffic is expected to increase eightfold, from 376 million to 3-3.5 billion annually by 2047. International traffic may constitute 10-12% of this growth.**
  - The plan is part of [Vision 2047](#), aiming to accommodate this massive increase in air travel demand.

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## Passenger Growth

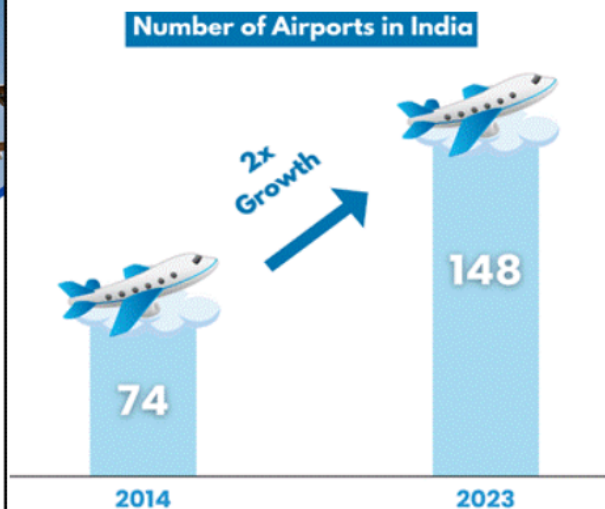
(In Millions)



- UDAN Scheme Implementation: Improving connectivity to tier-II and -III cities through schemes like [UDAN \(Ude Desh ka Aam Nagrik\)](#).**
  - In 2014, there were 74 operational airports, which has now increased to 148. Under the UDAN scheme, 68 underserved/unserved destinations, including 58 airports, 8 heliports, and 2 water aerodromes, have been connected. It has provided air connectivity to over 29 states/union territories.
  - India's aviation infrastructure is the overcrowding of airports. With the surge in air travel demand, major airports across the country are operating beyond their designed capacities.**

**RCS-UDAN**  
Regional Connectivity Scheme - Ude Desh ka Aam Nagrik

- ₹4500 crore allocated for airport development; ₹3751 crore utilized so far.
- 517 RCS routes connect 76 airports, including 9 heliports & 2 water aerodromes.
- More than 1.30 crore people have availed of the benefits of the scheme.



- Rising Income Levels: India's economy is projected to grow substantially by 2047, with per capita income expected to reach USD 18,000-USD 20,000. This economic growth is a crucial factor driving aviation expansion.**
  - Higher disposable incomes make air travel more affordable for a larger segment of the population.
  - A **growing middle class is likely to choose air travel over other modes** of transportation for both business and leisure.
  - Increased business activities and tourism resulting from economic growth will further boost demand for air travel.

# THE UNSTOPPABLE RISE OF INDIA'S MIDDLE CLASS

AVERAGE INCOME OF MIDDLE CLASS (WEIGHTED MEAN)

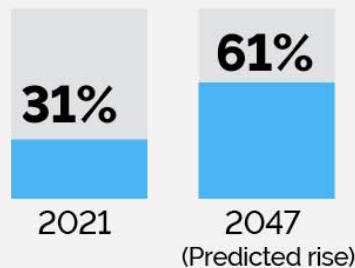


FUTURE OF MIDDLE CLASS

Average Income to Rise to **50 lakh by 2047**



MIDDLE CLASS'S SHARE IN POPULATION



- **Anticipated Growth in Air Cargo:** While passenger traffic is a primary focus, the expansion also considers the growing air cargo sector.
  - E-commerce growth is driving demand for efficient air freight services.
  - India aims to become a major player in the global air cargo market.
  - New and expanded airports will have enhanced cargo-handling capabilities.
- **Development of Major International Hubs:** India aims to position its major airports as international hubs, competing with established hubs in the **Middle East and Southeast Asia**.
  - This aspiration is driving the expansion and modernization of existing airports, as well as the development of new ones to attract more international airlines and passengers, increase transit traffic, and **boost tourism and business travel to India**.
- **Under-Penetration of Air Travel:** India's aviation market is one of the largest in the world, but air travel penetration is still low compared to developed countries.
  - The AAI's assessment provides interesting comparisons with other major markets: China (2019): 0.47 trips per capita per annum (GDP per capita: USD 10,144), USA: 1.2-1.3 trips per capita per annum (GDP per capita: USD 20,000) and India's projection for 2047: 1 trip per capita per annum (Estimated GDP per capita: USD 18,000-USD 20,000)
  - This creates a huge growth opportunity as income levels rise and air travel becomes more accessible, there is expected to be a surge in demand.
  - The expansion plan is designed to anticipate and prepare for this expected growth in air

travel adoption.

## Airports Authority of India (AAI)

- The AAI is a **statutory body** under the [Directorate General of Civil Aviation](#), Ministry of Civil Aviation, Government of India. It was formed in 1995, by merging the **National Airports Authority and the International Airports Authority of India**.
- It also provides **Air Traffic Management Services** over Indian airspace and adjoining oceanic areas.
- The functions of AAI include airport development, airspace control, passenger and cargo terminal management, and provision of communication and navigation aids.
- AAI provides air navigation services over **2.8 million square nautical miles of air space**.

## What are the Challenges for the Expansion of Airports in India?

- **Land Scarcity: Increasing [urbanization](#) is exacerbating the land shortage, particularly in larger towns and cities. The cost and availability of land may impact the viability of many airport projects.**
- **Massive Investment Requirements:** India needs more than USD 40 billion in airport development by 2047.
  - Total expenditure could reach USD 70-80 billion when including upgrades to airspace infrastructure and ground transportation.
- **Infrastructure Constraints:** Many existing airports are reaching or have reached saturation, including critical hubs like Mumbai. Several cities urgently need new airports or significant expansions of existing ones; this can hinder the development process of new airports.
- **Air Navigation Services (ANS) Infrastructure:** Significant investments (possibly up to USD 6-7 billion) are needed in ANS technology, people, and training.
- **Surface Transportation:** Investment required in ground transportation to/from airports could be almost as much as that in the airports themselves.
  - Lack of adequate surface connectivity could impact the viability and convenience of new airports.
- **Environmental Concerns:** Airport expansions often face opposition due to potential environmental impacts, including [noise pollution](#) and **habitat disruption**.

## Way Forward

- **Integrated Land Use Planning: Create special economic zones around airports, similar to "Aerotropolis" concept, which combines the airport with business, logistics, and residential areas. This can help justify land acquisition and maximize economic benefits.**
- **Multi-Modal Transportation Integration:** Develop integrated transportation hubs like Frankfurt Airport's long-distance train station, which **connects the airport directly to the national rail network**. This addresses **surface transportation challenges and enhances airport accessibility**.
- **Green Airport Design: Prioritize sustainable and environmentally friendly airport designs. Adopt Oslo Airport's approach of using sustainable materials and other eco-friendly technologies.**
  - Oslo Airport in Norway uses biomass heating systems to combat harsh Nordic winters, utilising organic materials for warmth.
  - Design airports with **flexibility for future expansion and changing needs** and adaptations to changing aviation trends.

- **Public-Private Partnerships (PPP):** Leverage **PPP models** to attract investment and expertise. Develop a robust PPP framework similar to **build-operate-transfer (BOT)** model This can help address the massive investment requirements while ensuring efficient operation.
- **Capacity Enhancement of Existing Airports:** Maximizing capacity through **technological and operational improvements**. This includes implementing advanced air traffic management systems and **optimizing runway usage**, to increase capacity without building new runways.
- **Smart Airport Technologies:** Leverage cutting-edge technologies to enhance efficiency and passenger experience. Adopt technologies like **biometric boarding** and **automated baggage handling systems** to improve operational efficiency and capacity.

**Drishti Mains Question:**

**Q.** Discuss India's Vision 2047 for airport infrastructure expansion, and how does it aim to meet the anticipated increase in passenger traffic?

## UPSC Civil Services Examination, Previous Year Questions (PYQs)

### **Mains**

**Q.** Examine the development of Airports in India through joint ventures under Public-Private Partnership (PPP) model. What are the challenges faced by the authorities in this regard? **(2017)**

PDF Reference URL: <https://www.drishtias.com/printpdf/india-s-ambitious-airport-expansion-plan>

