



# India's Aviation Industry

**For Prelims:** [India's Aviation Industry](#), Aviation turbine fuel, [RCS-UDAN](#), National Civil Aviation Policy 2016, Sustainable Aviation Fuels.

**For Mains:** Status of the Aviation Industry in India, Measures to Re-energize the Aviation Sector in India.

[Source: TH](#)

## Why in News?

[India's aviation industry](#) has witnessed remarkable growth in recent years. However, this rapid expansion has also highlighted critical issues including **severe shortage of experienced pilots**.

## What is the Status of the Aviation Industry in India?

- **About:** India's aviation industry is a collective sector encompassing all aspects of civil aviation within the country.
  - It includes various components, such as **airlines**, [airports](#), **aircraft manufacturing**, **aviation services**, and **regulatory authorities**.
- **Status:**
  - India has become the **third-largest domestic aviation market** in the world. India's airport capacity is expected to handle 1 billion trips annually by 2023.
  - According to the data released by the **Department for Promotion of Industry and Internal Trade (DPIIT)**, FDI inflow in India's air transport sector (including air freight) reached **USD 3.73 billion** between **April 2000-December 2022**.
- **Associated Challenges:**
  - **Infrastructure Constraints:**
    - **Airport Congestion:** Many major airports in India, including those in **Mumbai and Delhi**, face severe congestion, leading to **delays and operational inefficiencies**.
    - **Limited Regional Connectivity:** While major cities are well-connected, smaller towns and regions often lack adequate airport infrastructure and air connectivity.
  - **High Operating Costs:**
    - High taxes on [aviation turbine fuel \(ATF\)](#) and airport charges contribute to increased operating costs.
      - Some Indian states charge up to **30% taxes on jet fuel**, which makes shorter flight routes unprofitable for smaller airlines.
  - **Pilot Shortages:**
    - Airlines in India often struggle to recruit and retain experienced pilots, leading to disruptions and increased labor costs.
      - The surge in aircraft orders, **totaling over 1,100 new planes**, translates into a need for thousands of flight crew members.
      - However, the **average cost of pilot training in India is nearly ₹1 crore**.
        - Airlines often charge additional fees to cadet pilots under various

pretexts, significantly increasing the financial burden.

- **Security Threats:** Beyond **terrorism and hijacking**, security concerns are increasingly associated with **cyber threats to aviation infrastructure**, which can disrupt operations and compromise passenger data.
- **Other Challenges:** Critics argue that the management of medical standards by Indian Air Force doctors has led to the **grounding of a significant number of civilian pilots**.
  - Also, there are numerous challenges associated with operating a flying training center, **exacerbated by corruption** among officials who enforce **regulations dating back to pre-Independence times**
- **Related Government Initiatives:**
  - **Goods and Services Tax (GST)** rate reduced to 5% from 18% for domestic **Maintenance, Repair and Overhaul (MRO)** services.
  - **RCS-UDAN** was launched to **promote air connectivity to unserved and underserved airports in Tier-II and Tier-III cities** to stimulate regional growth and provide affordable air travel to the citizens.
  - **National Civil Aviation Policy 2016**

## What Steps can be Taken to Re-energize the Aviation Sector in India?

- **Eco-Friendly Initiatives:** There is a need to Incentivize the development and use of **electric or hybrid aircraft for short-haul flights**, reducing emissions and operational costs.
  - Also, there is a need to promote the use of **sustainable aviation fuels (SAFs)** and carbon offset programs to minimize the industry's environmental impact.
    - In June 2021, SpiceJet announced its ambitious target to fly 100 million domestic passengers on **SAF blend by 2030** under the aegis of the **World Economic Forum (WEF)**.
- **Digital Twins for Maintenance:**
  - There is a need to **implement digital twin technology** to create virtual replicas of aircraft, enabling predictive maintenance and reducing downtime.
- **Public-Private Partnerships (PPPs):**
  - There is a need to foster collaboration between the **government and private sector to co-invest in airport infrastructure development**, ensuring world-class facilities.
    - The number of PPP airports in India is likely to increase from five in 2014 to 24 in 2024.
- **Reducing the Pilot Gap:**
  - There is a need to **establish subsidized pilot training programs** in collaboration with aviation schools and academies.
    - This can make pilot training more affordable for aspiring aviators.
- **Aviation Tourism Packages:** To make India a hub of Aviation tourism, our aviation industry can **collaborate with the tourism industry to create innovative aviation-based tourism packages**, offering scenic flights, adventure experiences, and aerial photography tours.

## 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)**