

Air transport

[Transportation](#), [Airlines](#)



Air transport is the most modern means of transport which is unmatched by its speed, time- saving and long-distance operation. It is very important for a large country like India. Through it one can easily reach to remote and inaccessible areas like mountains, forests, deserts etc. It is very useful during the times of war and natural calamities like floods, earthquakes, famines, epidemics, hostility and collapse of law and order. The beginning of the air transport was made in 1911 with a 10 km air mail service between Allahabad and Naini.

The real progress was achieved in 1920 when some aerodromes were constructed and the Tata Sons Ltd. started operating internal air services (1922). Flying clubs were opened in Delhi, Karachi, Calcutta (now Kolkata) and Bombay (now Mumbai) in 1928. In 1933 another company Indian National Airways was constituted to serve between Karachi and Lahore. In 1938 . the Empire Air Mail Service was introduced to carry mail between the empire countries. In 1946, the Government set up the Air transport Licensing Board which granted 11 licenses. At the time of Independence 4 companies were operating their air services (Tata Sons Ltd. Indian National Airways, Air Services of India and Deccan Airways).

By 1951 there were 4 new entrants: (Bharat Airways, Himalayan Aviation Ltd. , Airways India, and Kalinga Airlines). Airports India has international airports besides 87 aerodromes divided into major, intermediate and minor categories. Its 5 major international airports are: Mumbai (Santa Cruz), Kolkata (Dum Dum), Delhi " (Palam), Chennai (Meenambakkam) and Thiruvananthapuram. The operation, management, planning and

development of these airports are the responsibility of the International Airports Authority of India.

These airports lie on the International Air routes and are used by Air India and foreign airliners. Here landing facilities are of international standard.

There are 22 major aerodromes at Agartala Ahmadabad, Amritsar, Aurangabad, Barapani, Bhubaneshwar, Bhuj, Delhi (Safadarjung), Guwahati, Hyderabad, Imphal, (Tuihal), Jaipur, Khajuraho, Lucknow, Nagpur, Panagarh. Patna, Ranchi, Tiruchchirappalli, Udaipur and Varanasi. These are also equipped with modern air services and landing facilities. Air Services The air services are provided by Civil Aviation and are managed by two public sector corporations.

Air India Limited is the major international carrier of the country. It has bilateral air services agreements with 100 countries of the world and provides air services to the USA, Europe, the Russian Confederation, the Middle East, East Asia, Far East and Africa. Air India owns a fleet of 37 aircraft consisting of 7 B-747-200, two B-747-300 (Combi), Six B-747-400, three A-300-B4 and eight A-320-300 aircrafts. It also has joint-venture services with three foreign carriers and seven 'Block Space' and 'Code Share Arrangements' with other foreign airlines.

During 2004-05 Air India carried 4.45 million passengers as against 2.91 million in 1996-97. Besides Air India, a number of foreign companies also operate in the country on international routes. Recently the Government has decided to disinvest Air India shares to make room for private and foreign companies. Indian Airlines is the major domestic air carrier of the country. It

also provides services to 14 countries, viz.. Pakistan, Maldives, Nepal, Sri Lanka, Malaysia, Bangladesh. Thailand, Singapore, UAE, Oman, Myanmar, Kuwait, Qatar and Bahrain.

Its operations cover 77 destinations including 19 abroad. It owns a fleet of 67 aircrafts consisting of ten A-300 s, thirty A-320s, twelve B- 737 and three DO-228 aircrafts. All Boieing 737 aircrafts are operated by its wholly-owned subsidiary Alliance Air. Air Cargo Air cargo is an important aspect of air services. The total cargo handled at AAI airports was 12. 80 lakh tons in 2004-05 which is roughly seven times than that of 1980[^]81 (1, 78, 700 tons).

Most of the important cargo consists of perishable goods (meat, fish, fruits, vegetables, flowers etc. , readymade garments, leather goods, machinery, pharmaceuticals, gems and jewellery, professional and scientific equipments. Some mail to principal cities of the country is carried by air. Santa Cruz (Mumbai) airport tops in handling the air cargo, followed by Palam (Delhi) Meenambakkam (Chennai) and Dum Dum (Kolkata). In order to help the Indian exporters and make their exports more competitive, the Government had introduced in April 1990 an 'open sky policy' for cargo. Under this policy any foreign airlines or association of exporters can bring freighters to the country for upliftment of cargo.

The Government has also permitted market forces to determine cargo tariff, with IATA rates as the floor rates. India has about 14, 500 km of navigable waterways which comprise of rivers, canals, backwaters, creeks, etc. About 55 million tones of cargo is being moved annually by Inland Water Transport

(IWT), a fuel - efficient and environment -friendly mode. Its operations are currently restricted to a few stretches in the Ganga-Bhagirathi-Hooghly rivers , the Brahmaputra, the Barak river, the rivers in Goa, the backwaters in Kerala, inland waters in Mumbai and the deltaic regions of the Godavari - Krishna rivers.

Besides these organized operations by mechanized vessels, country boats of various capacities also operate in various rivers and canals. and substantial quantum of cargo and passengers are transported in this unorganized sector as well. Inland Waterways Inland waterways refer to using inland water bodies like rivers, canals, backwaters, creeks, etc for transporting goods and people from one place to another. India has a long historical tradition of using such waterways. Ganga, Brahmaputra, Indus, Yamuna, Mahanadi, Godavari, Krishna, Kaveri, Narmada and Tapi etc. are the main arteries of the country's transport system giving birth to a number of inland river ports and jetties.

The decline of river transport began with the construction of the railways during the middle of the 19th century. Later on the development of roads adversely affected the prospects of such transport. The diversion of river water irrigation canals made many of these rivers unsuitable for navigation,. So much so that today its share is only one per cent in the country's transport system Airplanes * The fixed-wing aircraft is the most popular form of air transportation available.

According to FlightAware, a flight tracking organization, there are 49, 315 commercial flights around the world each day that use fixed-wing aircraft.

Nearly 1.1 billion people are flown each year. Fixed-wing aircraft are distinguishable from other types of air transportation in that they achieve lift through forward motion. A long runway is needed for the vehicles to achieve enough velocity to become airborne. Airplanes use a propeller or jet engine to power the aircraft, and the wings act as a stabilizer for keeping the vehicle in the air. The first design for functional fixed-wing aircraft dates back to the 1800s.

Most of these designs were models that were not large enough to hold passengers. The first official sustained flight was performed by the Wright Brothers on Dec. 17, 1903. Over the next decade, advances in the technology continued. World War I became the first full-scale testing ground for fixed-wing aircraft. Thousands of planes were built for the purpose of spying, bombing and fighting. By the time the war ended, aviation had become a science. Following the war, larger passenger planes were produced, and ultimately, the jet engine was designed, making way for one of the fastest modes of transportation in the world.

Airplanes are used by militaries and civilian agencies around the world. They have been incorporated with luxurious facilities in the case of passenger planes and extensive weapons systems for military use. Helicopters * With the success of the fixed-wing aircraft, engineers and technicians looked for a way to make the general principles of airplanes, sustained and fast flight, more efficient. The goal was to develop a flying vehicle that could take off from a sitting position and carry people to another location. This invention is the helicopter.

Helicopters are propelled using horizontal rotors consisting of two or more blades. These blades rotate around the top of the machine, and achieve lift, pulling the body of the helicopter along. Designs for the helicopter had been conceived as far back as the 1480s, with Leonard da Vinci. However, it wasn't until the early 1900s that individuals created working models. The post-war era saw the birth of the helicopter industry. However, most models can only carry four to six people, limiting its commercial use. The primary applications for helicopters are in the military, law enforcement, medical, news or fire control sectors.