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- a. **General Aviation Airports** - This includes publicly-owned general aviation airports that do not have scheduled services and have fewer than 2,500 annual passenger boardings. General aviation airports, a category within civil aviation, cater to the requirements of a number of flying activities, like instructional flying, pleasure flying, business flying, aerial work, agricultural flying and other flying. In some countries, like USA, the number of general airports is more than that of commercial airports.
- b. **Commercial Airports** - Commercial airports receive scheduled passenger services and have at least 2,500 passenger boardings each calendar. Every country usually has commercial airports for ensuring global connectivity. An airport for commercial purposes will have not only the facilities and services for the aircraft to land and take-off, but also have a range of commercial services that can cater to the requirements of the passengers. A wide variety of commercial facilities ranging from shops, duty free shops, gift shops, restaurants to conference facilities available in these airports these days. Typically, commercial airports are of three types -
  - i. **International Airports** - ICAO defines an international airport as “any airport designated by the Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic, where the formalities such as customs, immigration, public health, agricultural quarantine and similar procedures are carried out.” (ICAO Definitions, UVS International). International airports allow one to travel all over the world as it usually focuses on the scheduled air transport services to foreign countries. The key difference with the domestic airports is that the international airports are set up for border control and customs inspections.
  - ii. **Domestic Airports** - Domestic airports have scheduled services to destinations located within countries and generally only allow flights from within the same country. At some instances we come across *Model Airports* - these are the domestic airports which have minimum runway length of 7500 feet and adequate terminal capacity to handle Airbus 320 type of aircraft; and if required, can cater to limited international traffic. Unlike, International Airports, Domestic airports do not have customs and immigration facilities.
  - iii. **Custom** - A customs airport is an airport notified by the appropriate customs authority of the country as an airport which shall be airport for the unloading of imported goods and the loading of export goods or any class of such goods. Customs airports may or may not have international commercial flights. In case they have international scheduled flights, the



have custom and immigration facilities are available only for limited international operations by national carriers and for foreign tourist and cargo charter flights. The customs officers may only be in attendance for scheduled international services. Such airports may also have boarding stations in it or near them for the purpose of boarding or disembarkation from vessels by officers of customs.

3. **Civil Enclaves in Defence Airport** - Civil enclaves are part of airports of armed forces that are used for commercial flights. In India, there are 26 civil enclaves in Defence airfields. Civil Enclaves means the area, allotted at an airport belonging to any armed force of the Union, for use by persons availing of any air transport services from such airport or for the handling of baggage or cargo by such service, and includes land comprising of any building and structure on such area.

## B. Based on Ownership

Airports across the world has different ownership pattern. We can classify Airports based on who is maintaining and providing services at the airport. Based on ownership of the airport we can say that airports are:

1. **Public Sector/ Government / State owned** – These refers to the Airports that are looked after by the Government and is a Public Sector undertaking. In India, Airports till few years ago were owned and maintained only by the Airport Authority of India (AAI) under the Ministry of Civil Aviation. Today the scenario is changing, although AAI still has airports that are entirely under its jurisdiction.
2. **Privately Owned** – Privately Owned airports refer to the airports that were built by private operators or private operators have taken the airports on lease form the government. The management, operation and development of the airport will be entirely the responsibility of the private entity.  
In India ‘private airport’ means an airport owned, developed or managed by any person or agency other than AAI or any State Government or any person or agency jointly with the Authority or any State Government or both where the share of such person or agency as the case may be in the assets of the private airport is more than fifty per cent. Recently, Indian government has identified 13 airports that will be privatized by year 2022.
3. **Public Private Partnership (PPP) Model:** As the name suggests, these airports are in PPP model, with both public and private sector having a stake in the Airport. In India, PPP model can be taken up either for the management of an airport on lease or join AAI in the development and management of a greenfield airport.

## C. Based on Location

Location here refers to either land based or water based.

1. **Land Based** – Almost all the airports that we see are land-based airports.
2. **Water Based** - A water aerodrome is an area of open water used regularly by seaplanes, floatplanes or amphibious aircraft for landing and taking off. Although all water aerodromes are not like the airports we commonly come across,

yet many of these water aerodromes are the only way to reach an island. We have the example of Nanaimo Harbour Water Aerodrome in British Columbia, Canada (IATA Code – ZNA) which was formerly classified as an airport; and still is an airport of entry, staffed by Canada Border Service Agency. We have many examples of water aerodromes across the world.

In India, under the UDAN Scheme, 10 water aerodromes are being developed at Gujrat, Assam, Telangana, Andaman and Nicobar Islands and Andhra Pradesh. These water aerodromes along with the land-based airports will be useful for local short distance travel as well as be a tourist attraction at some of the destinations.

#### **D. Based on Development Process**

1. **Brown Field Airport:** Brownfield Airports are the airports which are being modified or upgraded from existing facilities. For example, extension and upgradation of the infrastructure and facilities at IGI Airport would be considered a Brownfield Airport Project
2. **Green Field Airport:** Greenfield Airport means a new airport which is built from scratch in a new location; either because the existing airport is unable to meet the projected requirements of traffic or the city in question does not already have an airport. The word Greenfield originates from software engineering, meaning a project which lacks any constraints imposed by prior work. In India, rules have been framed for Green Field Airports, like No Greenfield airport will normally be allowed within an aerial distance of 150 kilometers of an existing airport

#### **E. Based on Air Traffic Control Tower**

Air Traffic Control (ATC) is always in communication with the pilot, especially during the take-off and landing of a flight. The role of ATC is critical for the safety of aircrafts and the passengers. Air traffic control (ATC) is responsible for providing the safe, orderly, and expeditious flow of air traffic at airports where the type of operations and/or volume of traffic requires such a service. Pilots communicates with ATC using two – way radio and have to acknowledge and comply with the directions of ATC to ensure a safe flight. We see that there are two types of airports -

1. **Towered** – Towered airports refer to the airports that has an operating Air Traffic Control (ATC) tower.
2. **Non-Towered** – Non towered airports are those airports that are not served by an operating air traffic control (ATC) tower. Although it seems unlikely, but non towered airports are much more common than towered fields. In fact, nearly 20,000 airports in the United States are nontowered, compared to approximately 500 that have towers. Millions of safe operations in all types of aircraft are conducted at nontowered airports in a variety of weather conditions since there is a set protocol to follow when using a non-towered airport.

We have discussed how the airports can be classified based on many parameters. Other than the above classification we also see that in some parts of USA a different classification of

airports is mentioned as – National, Regional, Local, Basic and Unclassified. These airports are identified thus based on the reach of the airport, passenger traffic, volume of flights as well as connectivity among other things.

As per Airport Authority of India (AAI), Airports are presently classified in the following manner: -



- 1. International Airports:** These are declared as international airports and are available for scheduled international operations by Indian and foreign carriers. Presently, Mumbai, Delhi, Chennai, Kolkata, Hyderabad, Bangalore, Nagpur, Cochin Thiruvananthapura, Ahmedabad, Amritsar, Guwahati, Jaipur, Goa, Calicut, Srinagar, Portblair, Lucknow, Varanasi, Tiruchirapalli, Mangalore, Coimbatore, Bhubaneswar and Imphal are in this category.
- 2. Custom Airports:** These airports have custom and immigration facilities for limited international operations by national carriers and for foreign tourist and cargo charter flights. These include Gaya, Patna, Madurai, Pune, Bagdogra, Chandigarh and Visakhapatnam.
- 3. Domestic Airports:** All other airports are covered in this category.
- 4. Civil Enclaves in Defence Airport:** There are 26 civil enclaves in Defence airfields

AAI has also proposed a new Classification of Airports. AAI plans to develop the capacity of airports in accordance with the future projections, and it is proposed to reclassify the airports as follows:

- 1. International Hubs:** This category will be that of 'International Hubs' which may cover airports currently classified at 'international airports' and those eminently qualified to be upgraded as such. These would at present cover Delhi, Mumbai, Chennai, Calcutta and Thiruvananthapuram. Airports at Bangalore, Hyderabad, Ahmedabad, Amritsar and Guwahati can be added to the list as and when the facilities are upgraded to the desired level. International hubs would be used for dispersal of international traffic to the hinterland. In these airports, the facilities shall be of world class standards, including convenient connections to international and domestic passengers, airport-related infrastructure like hotels, shopping areas, conferencing and entertainment facilities, aircraft-maintenance bases, etc.
- 2. Regional Hubs:** Government is keen to encourage development of regional airlines based on small aircraft to provide air-linkages in the interior areas of the country. Regional hubs will have to act as operational bases for regional airlines and also have all the facilities currently postulated for model airports, including the capability to handle limited international traffic. The identification of Regional Hubs will be made on the basis of origin-destination surveys, traffic demand and the requirements of the airlines. State Govt. will be closely associated as co-promoters of regional airlines.
- 3. Other operational airports:** These will be developed so as to be cost-effective on the basis of individual needs to meet the requirements of traffic handled by them. Airports serving State Capitals will be given priority.

The status of individual airports may be reviewed at five-yearly intervals, on the recommendation of a Committee of Experts. Grant of status as international hubs will be with prior Cabinet approval and international hubs shall have the status of 'international airport' for purposes of bilateral agreements.