CHAPTER 23

CIVIL AVIATION

23.1 **The World of Air Transport 2013:** As per International Civil Aviation Organization, ICAO, Global air traffic has doubled in size every 15 years since 1977 . The 3.3 billion airline passengers carried in 2014 (an increase of 5.5% over 2013) are expected to grow to about six billion by 2030, and the number of departures is forecast to grow from 33 million (an increase of 2.1 % over 2013) in 2014, to some 60 million in 2030. In 2014, economic growth improved in the high-income European region and the United States, resulting in higher traffic growth in these States. Continued strong international traffic expansion was also observed in the United Arab Emirates and China, and strong growth was experienced in domestic traffic in both the Russian Federation and India. All of these positives offset the negative impact on traffic of overall economic weakness in other regions and low commodity prices in 2014.

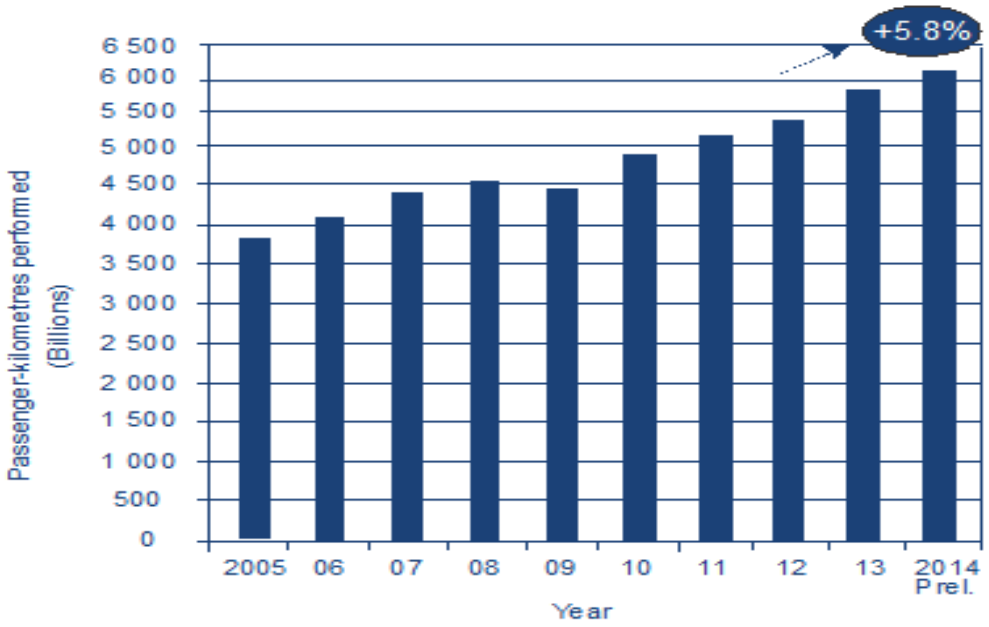
23.2 Passenger traffic, expressed in terms of total scheduled revenue passenger-kilometres performed (RPK), posted an increase of 5.8 per cent with approximately 6145 billion RPKs performed in 2014. Asia/Pacific remained the largest region with 32 per cent of world traffic, posting a 7.0 per cent growth in 2014, followed by Europe with 27 per cent of world traffic and growth of 6.0 per cent over 2013. North America, which accounts for 25 per cent of world traffic, grew at 3.0 per cent. The Middle East region once again recorded the highest growth rate at 11.3 per cent, representing 9.0 per cent of world traffic. The Latin America/Caribbean region accounted for 5.0 per cent of world traffic and grew at 5.3 per cent. The remaining world traffic (2.0 per cent) was performed by airlines of the African region with growth of 0.8 per cent in 2014.

23.3 International scheduled passenger traffic grew by 6.0 per cent in RPKs in 2014, up from the 5.7 per cent recorded in 2013. In Europe it increased by 5.9 per cent and Europe accounted for the largest share of international RPKs with 38 per cent. Asia/Pacific had the second largest share with 28 per cent, and grew by 5.8 per cent. The Middle East Region recorded the fastest growth of 11.5 per cent compared to 2013. Carriers in Africa experienced the slowest growth rate of 0.6 per cent.

23.4 In terms of domestic scheduled air services, overall markets grew by 5.6 per cent in 2014. North America, the world's largest domestic market with 44 per cent of the world domestic scheduled traffic, experienced 3.1 per cent growth in 2014. The Asia/Pacific region, which accounted for 38 per cent of world domestic scheduled traffic, grew strongly by 8.4 per cent in 2014, mainly due to an increase of 11.2 per

cent in the domestic Chinese market and 7.9 per cent in the domestic Indian market.

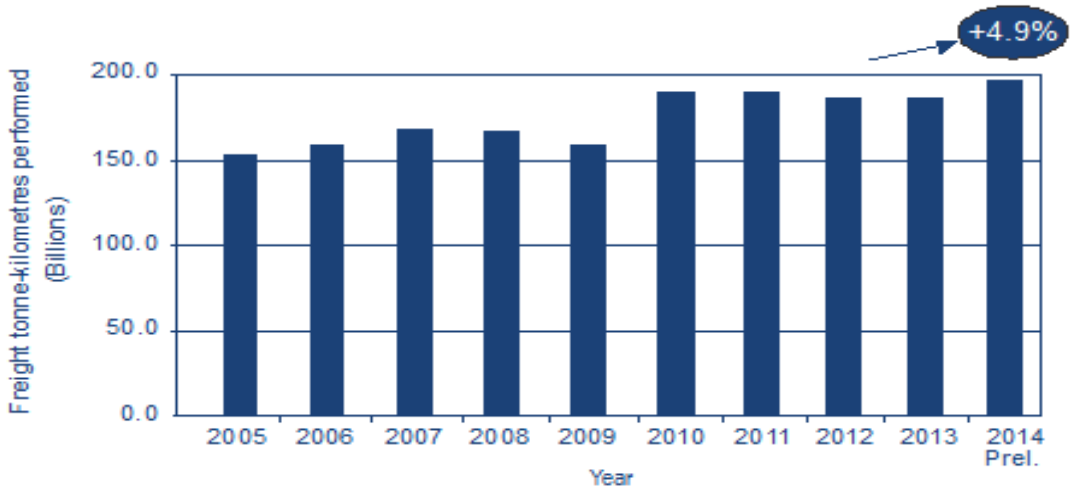
***Total scheduled traffic- revenue passenger kilometres* performed worldwide**



23.5 Low-cost carriers carried an estimated 900 million passengers in 2014, which is around 27 per cent of the world total scheduled passengers. This indicated a 10.3 per cent growth when compared to the number of passengers carried by low-cost carriers in 2013 which was almost double the world total average passenger growth rate. Capacity offered by the world's airlines, expressed as available seat-kilometres, increased globally by 5.6 per cent. The average passenger global load factor reached 79.7 per cent in 2014. Air carriers in all regions with the exception of Africa have been increasingly successful in optimizing their available capacity.

23.6 After nearly two years of negative or almost flat growth, scheduled total freight traffic rebounded in 2014, in line with improving economic prospects. Air freight, expressed in terms of scheduled total freight tonne-kilometres performed, posted an increase of 4.9 per cent. Approximately 50 million tonnes of freight were carried in 2014. Middle East carriers recorded overall double digit growth rates of 12.1 per cent. Africa grew at 6.0 per cent while Asia/Pacific increased by 5.5 per cent. North America, Europe and Latin America and the Caribbean grew at 3.2 per cent, 2.0 per cent and 1.2 per cent, respectively. Scheduled international freight tonne-kilometres performed posted an increase of 5.2 per cent with approximately 33 million tonnes of freight carried in 2014

Total scheduled traffic – freight tonne kilometres worldwide



23.7 Based on available figures, ICAO is estimating an operating profit of about 5.5 per cent on operating revenues for scheduled airlines of Member States. The operating profit is expected to be around USD 42 billion in 2014 based on operating revenues of USD 758 billion.

Development of Civil aviation in India :

23.8 In December 1912, the first domestic air route was unwrapped between Delhi and Karachi by the Indian State Air Services (in collaboration with Imperial Airways of the UK). This marked a new beginning in India. Then countries' first air mail service was started by the Tata Airlines in 1912. Although Tata Airlines was started as an air mail service but later it endeavored in carrying scheduled passenger traffic. Tata Airlines was renamed as Air India in 1946. In early 1948, a joint sector company, Air India International Ltd., was established by the Government of India and Air India (earlier Tata Airline). There were eight companies in service within and outside the country at the time of independence, namely Tata Airlines, Indian National Airways, Air service of India, Deccan Airways, Ambica Airways, Bharat Airways and Mistry Airways.

23.9 In wake of worsening financial conditions of airlines, in 1953, the government nationalized the airlines via the Air Corporations Act, 1953. This gave birth to Indian Airlines and Air India. Indian Airlines came into being with the merger of eight domestic airlines to operate domestic services, while Air India International was to operate the overseas services. Furthermore, the Act gave monopoly power to Indian Airlines to operate on domestic scheduled services ruling out any other operator. Air India became the single Indian carrier to operate on international itinerary excluding some routes to the neighbouring countries which were given to Indian Airlines.

23.10 The second phase of the sector began in the year 1986. In this period, the private sector players were granted permission to operate as air taxi operators. In 1994, government of India revoked the Air Corporation Act.

23.11 By 2003, only two private carriers survived to see the sunrise of the new century, i.e. Jet and Sahara. But the duopoly of **Jet and Sahara** as private carrier was challenged in 2003 by Air Deccan. **Air Deccan gave India its first Low Cost Carrier (LCC) or no frills Airline** which was a turning point in the history of Indian Aviation Sector. It marked a shift from the stereo type economy fares & business fares to the era of check fares ; web fares ; APEX fares ; internet auctions ; Special discounts ; Corporate plans ; last day fares; promotional fares etc. With the arrival of Deccan, reformation and innovation began in the aviation sector. Air traffic since then had tremendous growth rates**.** On witnessing the success of LCC Model, other airlines also started to operate in the sector and opted for No-Frill Model. These airlines included; **Kingfisher; Indigo; Paramount; Go Air** which began operations in India. Some new carriers such as Star Airlines, Skylark, Magic Air, Air One and some others were given license to operate in the sector.

23.12 Another milestone in the history of the Indian Aviation sector came in the year 2007. This was the year of mergers and collaborations in the Indian skies. In the year 2006, the merger of Jet-Sahara & IA-AI was announced but it materialized only in 2007. After this, the Indian aviation sector has witnessed a series of M&A of airlines namely: Indian-Air India; the Jet-Sahara Deal; the Kingfisher-Deccan Deal.

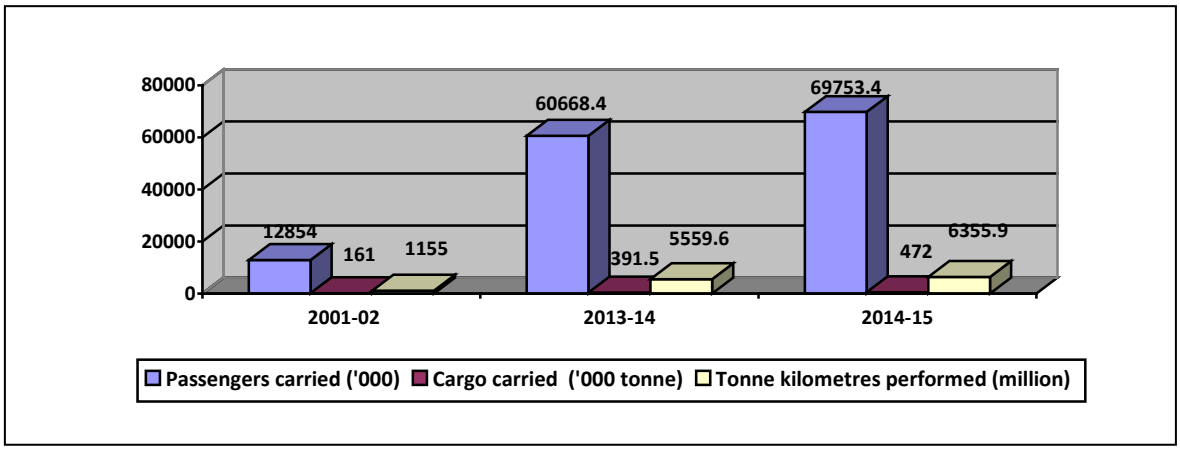
23.13 FDI in domestic airlines by international carriers, to help airlines making sustained losses, is expected to be another landmark in the aviation history .

Performance of Civil Aviation Industry in India: Indian carriers on Scheduled Operations (domestic and international)

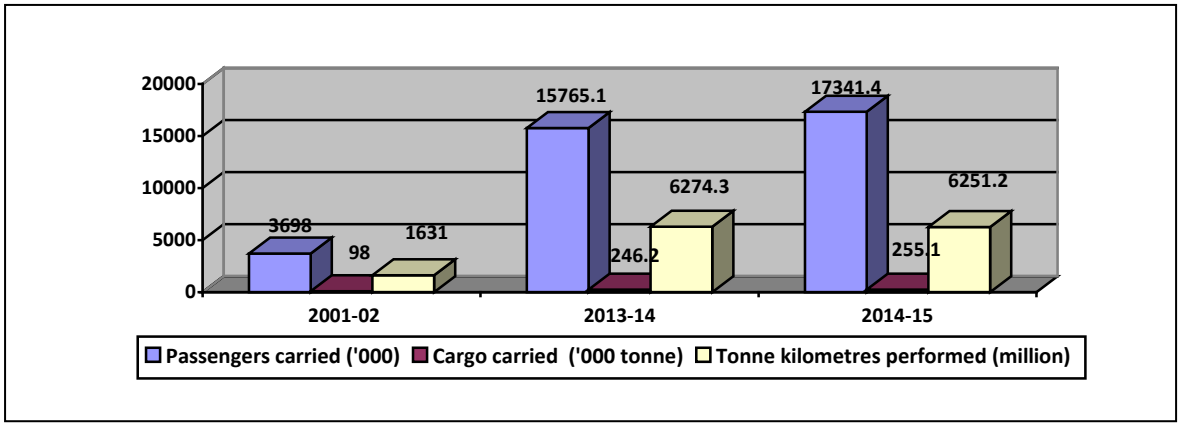
23.14 Since 2001-02, passengers carried by indian scheduled operators (domestic services) increased by about 443 per cent from 12.8 million to 69.8 million during 2014-15, whereas that in international services increased by about 369 per cent from 3.7 million to 17.3 million. Increase in cargo carried from 161 thousand tonnes & 98 thousand tonnes in 2001-02 , for domestic & international services respectively to 472 & 255 thousand tonnes during 2014-15, has been less spectacular, with about 193 & 160 percent growth respectively.

23.15 The performance figures during 2014-15 shows an improvement compared to the previous year (in terms of air traffic increase) and in terms of capacity utilization , except for tonne kilometer performed and Weight Load Factor of international opertaions .

Indian Carriers on Scheduled Operations- Domestic Services



Indian Carriers on Scheduled Operations- International Services



23.16 **Capacity Utilization :** Capacity utilization has increased since 2001-02 in domestic services with both passenger load factor (PLF)(increase from 55 % to above 70 % since 2009-10) and weight load factors(WLF)(from 52 % to around 65-70 % since 2009-10 reaching 73 % during 2014-15) recording an impressive increase . However, in the international services, the increase, during the same period, was lesser in case of PLF (from about 70 % in 2001-02 to about 75-79 % since 2011-12) and weight load factor recorded a decrease from 66% during 2001-02 to 55 % in 2007-08, increasing thereafter to 67 % in 2013-14 before decreasing again to reach 66.9 % during 2014-15.

23.17 Industry forecast suggests that India will be the fastest growing civil aviation market in the world by 2020 with about 420

million passengers being handled by the Indian Airport System as against 140 million in 2010.

23.18 Data of **Non scheduled services** of national carriers indicates better capacity utilization since 2010-11 with WLF in the range of 60-70 % even though it dropped by one percentage point during 2013-14 compared to the high of 69 % during 2012-13. The WLF has been usually been in the range of 27-36 % during 2000-01 to 2009-10. Compared to about 2.5 lakh passengers during 2012-13, the number of passengers carried on non scheduled services increased to over 3 lakh during 2013-14, whereas and total tones kilometers performed also increased to 13.6 million from 11.6 million.

Market Share :

23.19 Compared to initial days of aviation, marked by ubiquitous Air India, several private airlines have not only entered the domestic market but have also gained sizeable market share in the same. During 2014, comparison of data of passengers carried on scheduled domestic services indicates that Indigo led with 21.4 million passengers followed by Jet Airways & Spice Jet each carrying about 11.7 million passengers whereas Air India & Go Air carried 11.3 & 6.2 million passengers respectively .

TRAFFIC STATISTICS OF VARIOUS PRIVATE SCHEDULED DOMESTIC AIRLINES ON TOTAL (DOMESTIC+INTERNATIONAL) SCHEDULED SERVICES DURING 2013-14

	Unit	JET AIRWAYS	JETLITE	SPICEJET	GO AIR	INDIGO	Total
PASSENGERS CARRIED	Thou No.	17175.9	3307.1	12610.9	5252.4	19568.6	57915.0
PASSENGER - KILOMETRES PERFORMED	Million No.	29750.3	2862.3	13366.9	5018.6	23135.4	74133.5
SEAT - KILOMETRES AVAILABLE	Million No.	38067.4	3937.3	18494.1	6756.2	29967.6	97222.5
PASSENGER LOAD FACTOR	%	78.2	72.7	72.3	74.3	77.2	76.3
FREIGHT CARRIED	(000 TON)	203.6	17.6	80.4	43.9	106.6	452.1
TONNE - KILOMETRES PERFORMED							
PASSENGERS	Million	2467.4	235.7	1001.4	451.7	2074.3	6230.4
FREIGHT	Million	719.0	20.0	105.1	47.1	131.0	1022.4
TOTAL	Million	3195.4	256.3	1106.5	498.8	2205.3	7262.3
TONNE - KILOMETRES AVAILABLE	Million	4734.8	397.0	1582.7	727.4	3030.1	10472.0
WEIGHT LOAD FACTOR	%	67.5	64.6	69.9	68.6	72.8	69.3

PERCENTAGE SHARE OF							
	Unit	JET AIRWAYS	JETLITE	SPICEJET	GO AIR	INDIGO	Total
PASSENGERS CARRIED	%	29.7	5.7	21.8	9.1	33.8	100.0
PASSENGER - KILOMETRES PERFORMED	%	40.1	3.9	18.0	6.8	31.2	100.0
SEAT - KILOMETRES AVAILABLE	%	39.2	4.0	19.0	6.9	30.8	100.0
FREIGHT CARRIED	%	45.0	3.9	17.8	9.7	23.6	100.0
MAIL CARRIED	%	82.5	17.5	0.0	0.0	0.0	100.0
TONNE - KILOMETRES PERFORMED							
PASSENGERS	%	39.6	3.8	16.1	7.2	33.3	100.0
FREIGHT	%	70.3	2.0	10.3	4.6	12.8	100.0
MAIL	%	94.2	5.8	0.0	0.0	0.0	100.0
TOTAL	%	44.0	3.5	15.2	6.9	30.4	100.0
TONNE - KILOMETRES AVAILABLE	%	45.2	3.8	15.1	6.9	28.9	100.0

23.20 **Challenges before Indian Aviation Industry :** Civil aviation in India may be taken as a study in contrasts. Despite extraordinary growth in traffic, most of India's airlines are in a precarious condition. India has too few airports and today lacks the aviation safety infrastructure required to handle the growth.

23.21 In the recent past most of the civil air carriers in India were in financial distress and several of the budget carriers **Kingfisher, Paramount and MDLR** have ceased operations. At the same time, however, interest remains keen among prospective entrants to join the Indian market, especially in the wake of Government decisions allowing increased investment by foreign airlines in Indian carriers.

23.22 In 2012, the Indian Government announced that it would relax limits on **Foreign Direct Investment (FDI)** in Indian carriers, allowing a new maximum of 49 per cent. Early in April 2013, UAE-based Etihad Airlines announced its intention to buy a 24 per cent stake in Jet Airways. The subsequent processing of that investment was tortuous but the **Etihad-Jet** Airways deal finally went through. The Tata Group has announced its return to civil aviation, Through a link-up with AirAsia . The recently announced plans for **Air Asia India** and **Tata-SIA Airlines vistara** suggest that the Government's FDI policy changes are working to bring foreign airline capital to India's carriers.

23.23 Air carriers face other challenges in the web of national and state regulation and taxation. Indian carriers operate with some of the **highest fuel costs** in the world. India imports a huge percentage of

Aviation Turbine Fuel (ATF) from foreign sources and prices are set by Government-owned PSUs that exclude competition from private sources. State surcharge on fuel vary widely, from four to 30 per cent, and are not under effective control of the Central Government. Further pressure accrues as a consequence of the fall in the value of the rupee relative to the dollar. However there have been some signs of restraint on the part of state governments and recently some effect of negative movement of the rupee was also offset by decline in global fuel cost .

23.24 Infrastructure, however, remains a continuing challenge and potentially is the critical restraint upon the growth of India's civil aviation. **Congestion** at airports is another issue that irks the aviation industry in India. It not only influences the turnaround time of the aircraft and reduces the average aircraft utilization but also adds to the costs significantly in form of fuel wastage as the aircraft has to hang around in the sky. The **airport charges** levied by the Indian airports are amongst the highest in the Asian and the Gulf countries. India at present does not have any secondary airports for Low Cost Carriers (LCCs) and the Indian LCCs have to shell out comparatively higher airport charges than its international peers. However government has taken necessary steps to replace the Director General of Civil Aviation (DGCA) criticized as lacking in authority and resources, with a new and more powerful central aviation administration, the **Civil Aviation Authority (CAA)** which is expected to address the infrastructure related issues in a better way**.** .

23.25 The Civil Aviation industry has ushered in a new era of expansion, driven by factors such as low-cost carriers (LCCs), modern airports, Foreign Direct Investment (FDI) in domestic airlines, advanced information technology (IT) interventions and growing emphasis on regional connectivity.

23.26 **Governance & Infrastructure :** The **Ministry of Civil Aviation** is the authority responsible for policy formulation, development and regulation of the Civil Aviation industry in India. The Ministry oversees the planning and implementation of growth and expansion programmes in the civil aviation sector, airport infrastructure and air navigation services.

23.27 **Air Transport Directorate, of Office of The Director General of Civil Aviation** under the Ministry of Civil Aviation governed the Air Transport Services in the country by the Rule 134 and Schedule XI of Aircraft Rules 1937. Besides this, the Civil Aviation Requirements (CAR) Section 3 Series C Part I to VI deal with the minimum requirements and

procedures for issue/renewal of Scheduled/Non-Scheduled Operators Permit in different categories like passenger/cargo/charter.

23.28 **Airports Authority of India (AAI)** is an organization working under the Ministry of Civil Aviation that manages most of the airports in India. It is entrusted with the responsibility of creating, upgrading, maintaining and managing civil aviation infrastructure both on the ground and air space in the country.

23.29 During last few years, some of the airports have been privatized under revenue sharing agreement ,despite protests from AAI. The chief purpose behind privatization was to modernize the airports & upgrading their facilities. Amongst the major airports, Chennai & Kolkata airports are under the purview of privatization , after initial experiences of privatization of Delhi and Mumbai airports. Terminal-3 of Indira Gandhi International Airport , Delhi has already been operationalized .

23.30 **Source of information on Civil Aviation Statistics** : The **Statistics Division** of the **Air Transport Directorate** is responsible for maintaining data on aviation parameters governed by Aircraft Rules. Schedule XI of the Aircraft Rules, 1937 lays down that every person to whom a permit has been granted by DGCA under the Schedule shall submit to the DGCA the following:

- Monthly returns regarding the operations of the permitted air transport services
- Annual returns showing the financial results of the services or operations during each calendar year.

23.31 In compliance of above convention and Aircraft Act, the Statistical Division collects data pertaining to Civil Aviation from various sources viz. National Carriers, Private Operators – both scheduled and non-scheduled, Foreign Airlines and airports managed by Airports Authority of India.

23.32 At the moment 10 airlines are operating (four public carriers and 6 private carriers). Data from these scheduled air carriers is collected as per ICAO prescribed forms A, AS, B, C, D and EF, details of which are given in the following table.

ICAO Prescribed Forms for Collection of Civil Aviation Statistics		
Form No.	**Subject**	**Frequency**
Form-A	Traffic- Commercial Air Carriers	Monthly/Quarterly/Annual
Form-AS	Summary Forms (Traffic)	Annual
Form-B	On-Flight Origin and Destination (Scheduled Services (Rev.)- International operations	Quarterly
Form-C	Traffic by Flight Stage (Scheduled Services (Rev.)- International operations	Annual
Form-D	Fleet & Personnel- Commercial Air Carriers	Annual
Form-EF	Financial Data- Commercial Air Carriers	Annual

23.33 Besides the Indian carriers, foreign airlines also carry passengers to and from India. Monthly data on flights operated, number of passengers and amount of freight carried is collected from each airline. Passenger and freight traffic for the country as a whole as also city-pair and country wise are published annually and from 2010, this data is also being uploaded quarterly.

23.34 From the non-scheduled operators, data on number of flights operated as also the passengers carried is collected monthly. From the financial year 2008-09, data is also being collected as per ICAO prescribed forms A, D and EF. Data is collected every month from each airport on the aircraft movement, passengers embarked and disembarked and freight & mail loaded and unloaded.

23.35 The Statistics Division in DGCA Division collects data pertaining to Civil Aviation from various sources viz. Air India, Indian Airlines, Private Operators, Foreign Airlines and various airports managed by Airports Authority of India. The data thus collected are compiled and are then published annually in a publication entitled " **India Air Transport Statistics."** The publication includes traffic statistics in respect of scheduled and non-scheduled air services of domestic as well as foreign carriers; detailed information on fleet strength, aircraft utilization, staff strength, financial results of Air India, Indian Airlines and Airport statistics for both international and domestic

airports. Further, it includes statistics in respect of international traffic to/from India to various countries, domestic traffic carried by scheduled, non-scheduled and air taxi operators and traffic carried on tourist charter flights and flights operated under Open Sky Policy for all-cargo services. Some graphic charts are also given along with the tables. The data on passengers, freight & mail in this publication relates to revenue traffic only.

References:

- Annual Report of the Council 2014, International Civil Aviation Organisation
- Website of Directorate General of Civil Aviation.
- Challenges Facing Civil Aviation in India, Robert S Metzger, Indian Defence Review, Vol 28. Oct-Dec 2013.