पोस्ट ऑपरेशन विश्लेषण रिपोर्ट

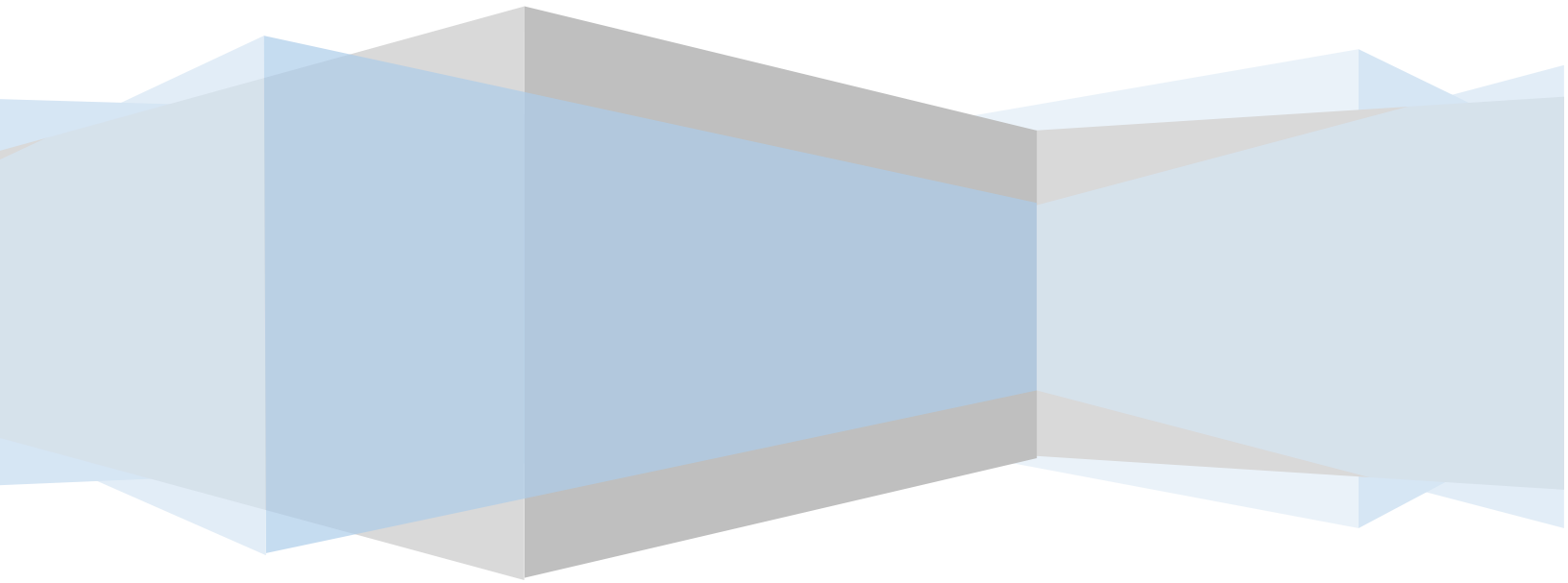
जनवरी, 2026

सेंट्रल कमांड सेंटर, सी ए टी एफ एम, दिल्ली

POST OPERATIONS ANALYSIS REPORT

January, 2026

CENTRAL COMMAND CENTER, C-ATFM, DELHI



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A. कार्यकारी सारांश/Executive Summary

Average Domestic air traffic (31 days) has recorded a decrease of 0.6% whereas the average international air traffic has decreased by 3.44% in the month of January 2026 as compared to December '25.

On average, the Indian Airports in the ATFCM area saw 4852 IFR flights per day in the month of January 2026. The peak days were on 09th January 2026 (5310 IFR flights). Friday's were the busiest days throughout this month with an average of 5145 IFR flights per day.

Total Forty Eight (40) ATFM measures were applied this month during periods of congestion at Chennai, Delhi and Mumbai Airport.

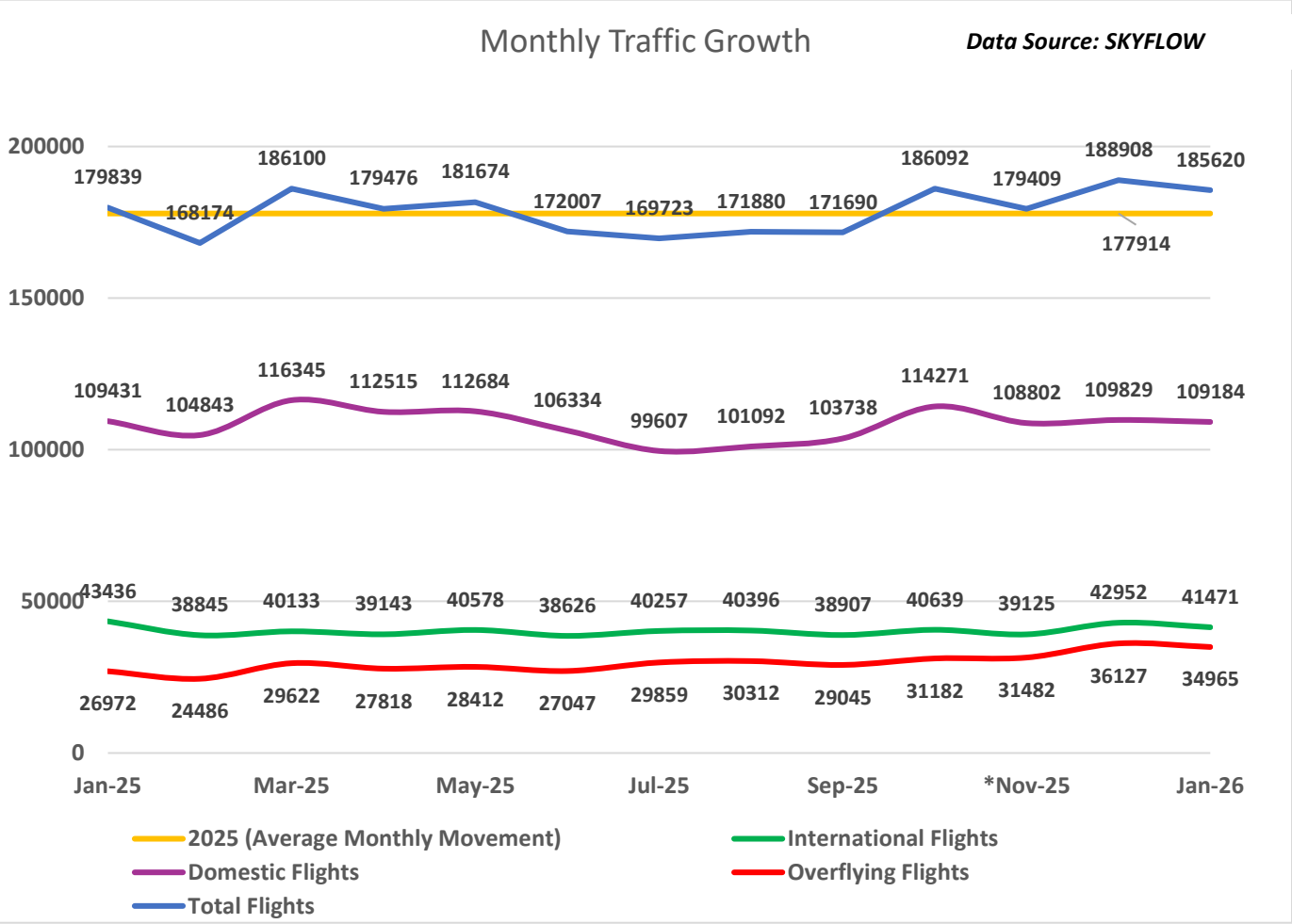


Figure 1: Monthly Traffic Growth

The graph above depicts the Domestic, International and Overflying Air traffic in Indian ATFCM Area during the last 13 months (Jan'25 to Jan'26).

B. यातायात विश्लेषण/Traffic Analysis

I. भारत के प्रमुख हवाई अड्डों पर हवाई यातायात गतिविधि /Air Traffic Movement at Major Airports in India

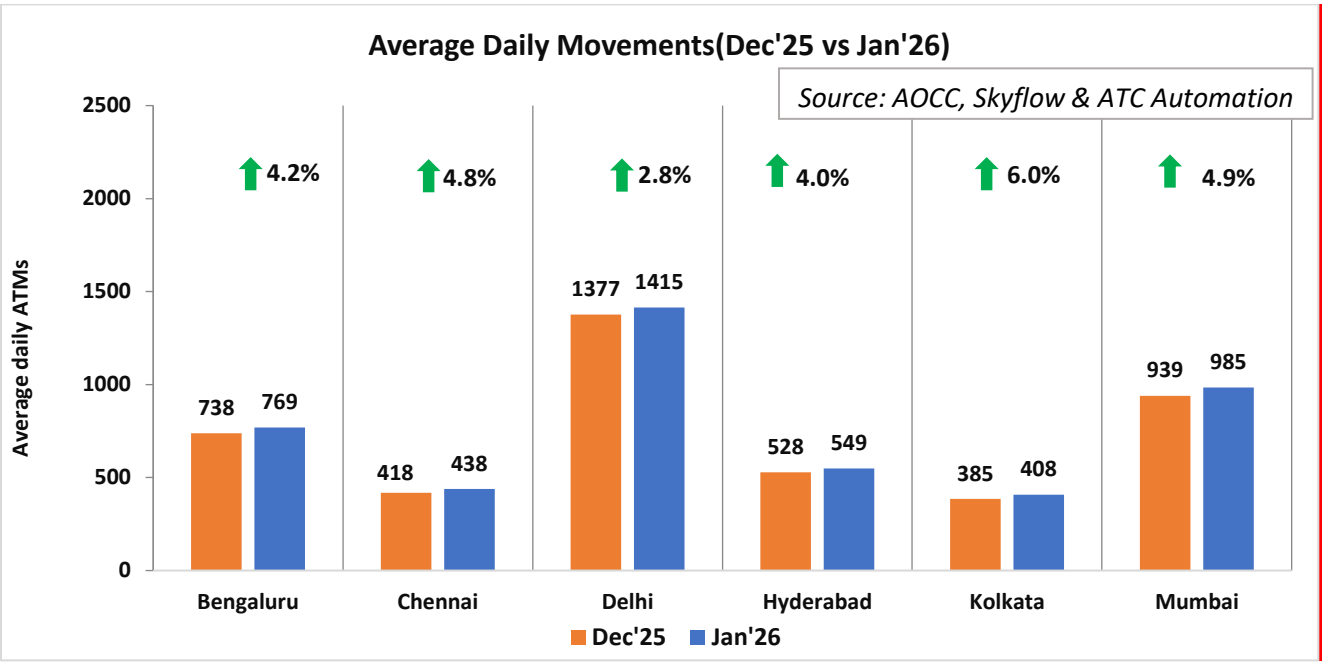


Figure 2: Average Daily Movements (Dec'25 vs Jan'26)

The above chart depicts the percentage change in average daily ATMs at six major Airports in January 2026 as compared to the previous month December 2025.

Airports\Year	Avg. Daily ATMs (YoY) for six major airports				
	Jan'22	Jan'23	Jan'24	Jan'25	Jan'26
Bengaluru	394	689	687	755	769
Chennai	278	390	401	464	438
Delhi	921	1255	1239	1329	1415
Hyderabad	327	460	497	569	549
Kolkata	286	391	371	404	408
Mumbai	569	919	953	963	985

Air Traffic Movement for each day in January 2026 is plotted for Delhi, Mumbai, Bengaluru and Hyderabad Airport along with the percentage change w.r.t. Avg. Daily Movements for the same month.

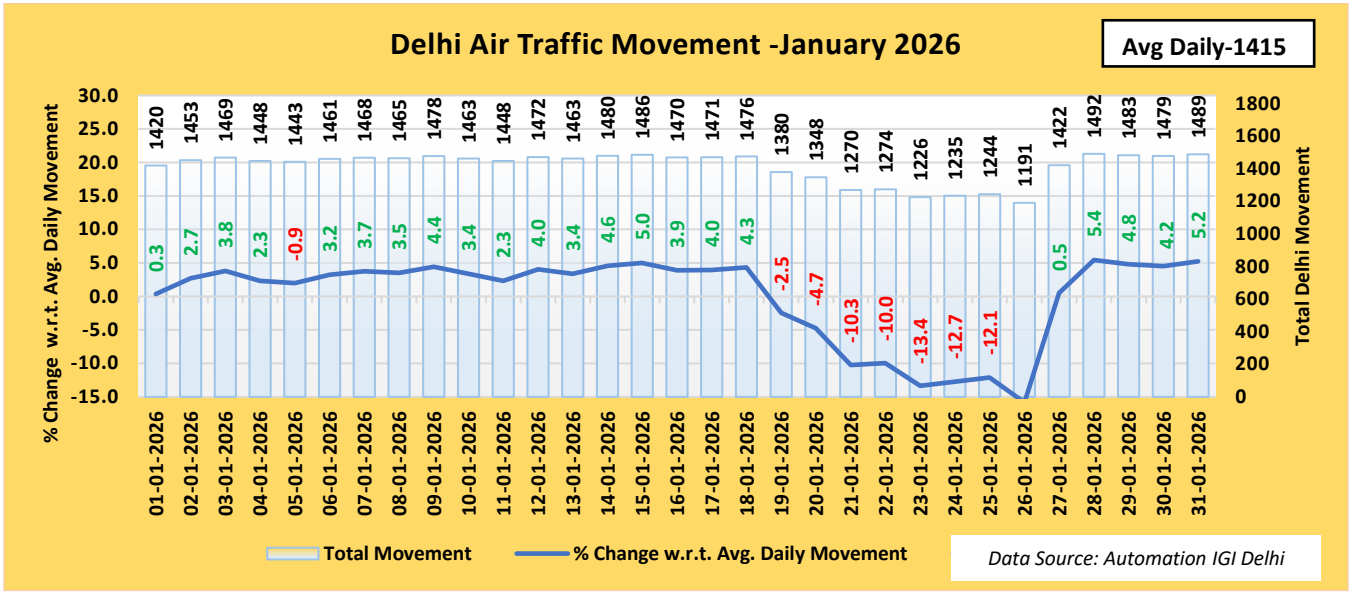


Figure 3: Air Traffic Movement for Delhi –Jan'26

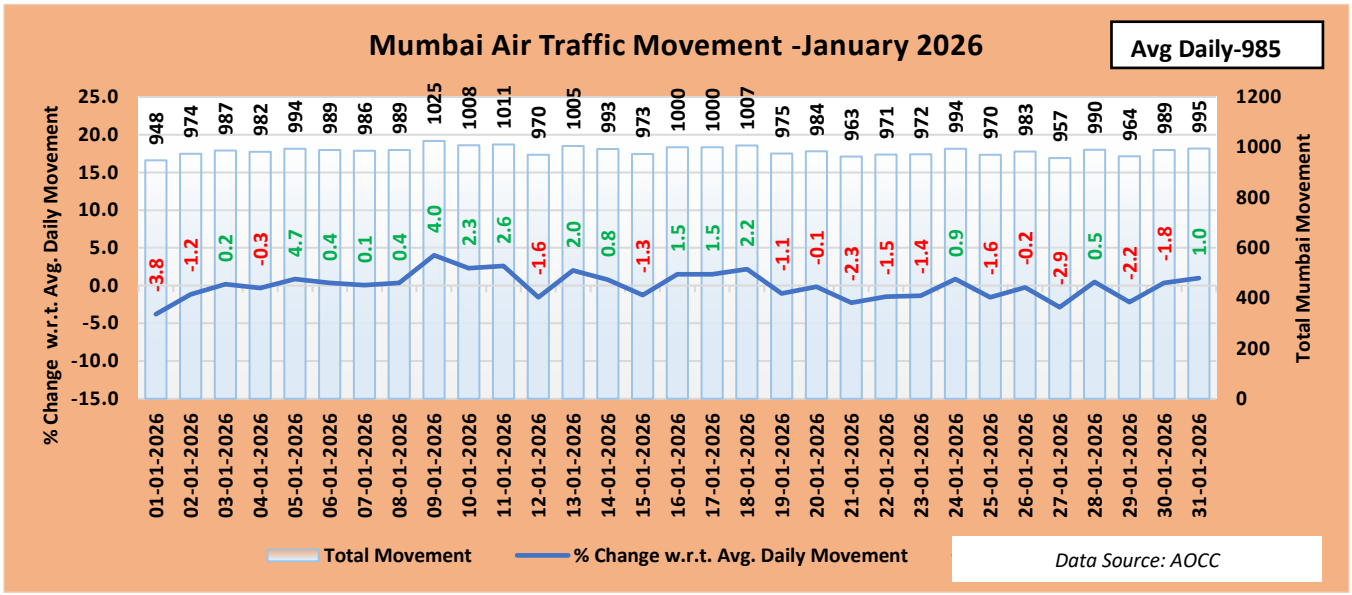


Figure 4: Air Traffic Movement for Mumbai – Jan'26

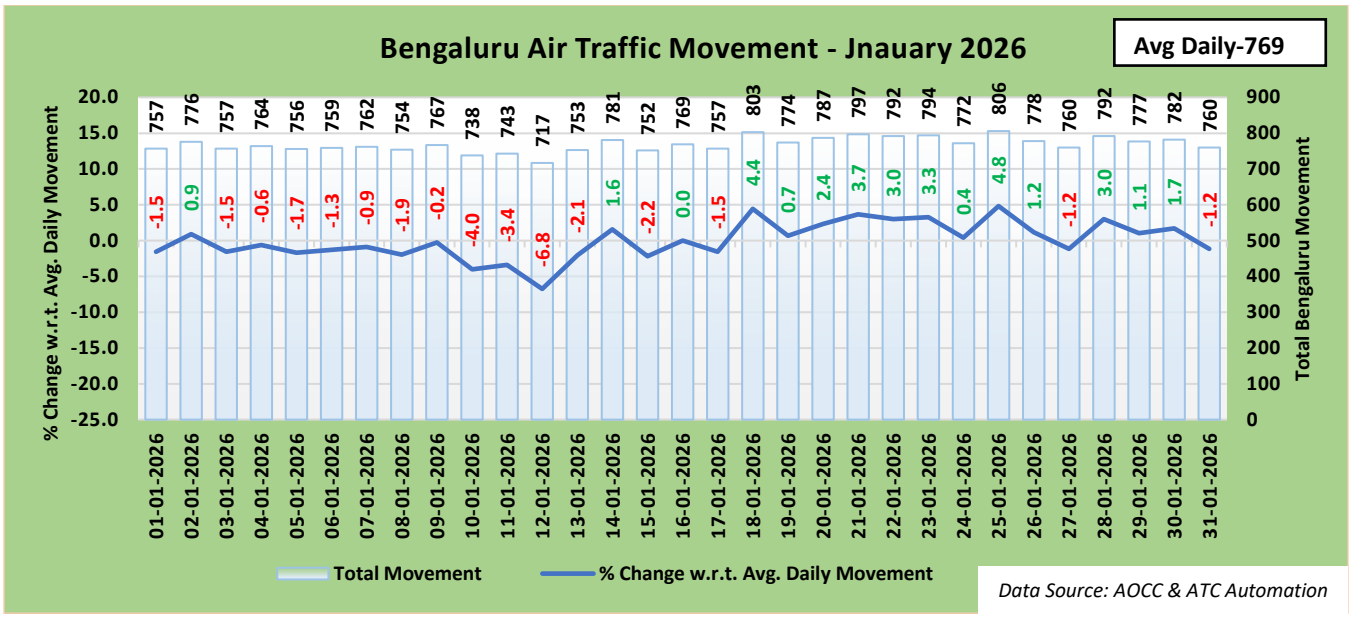


Figure 5: Air Traffic Movement for Bengaluru – Jan'26

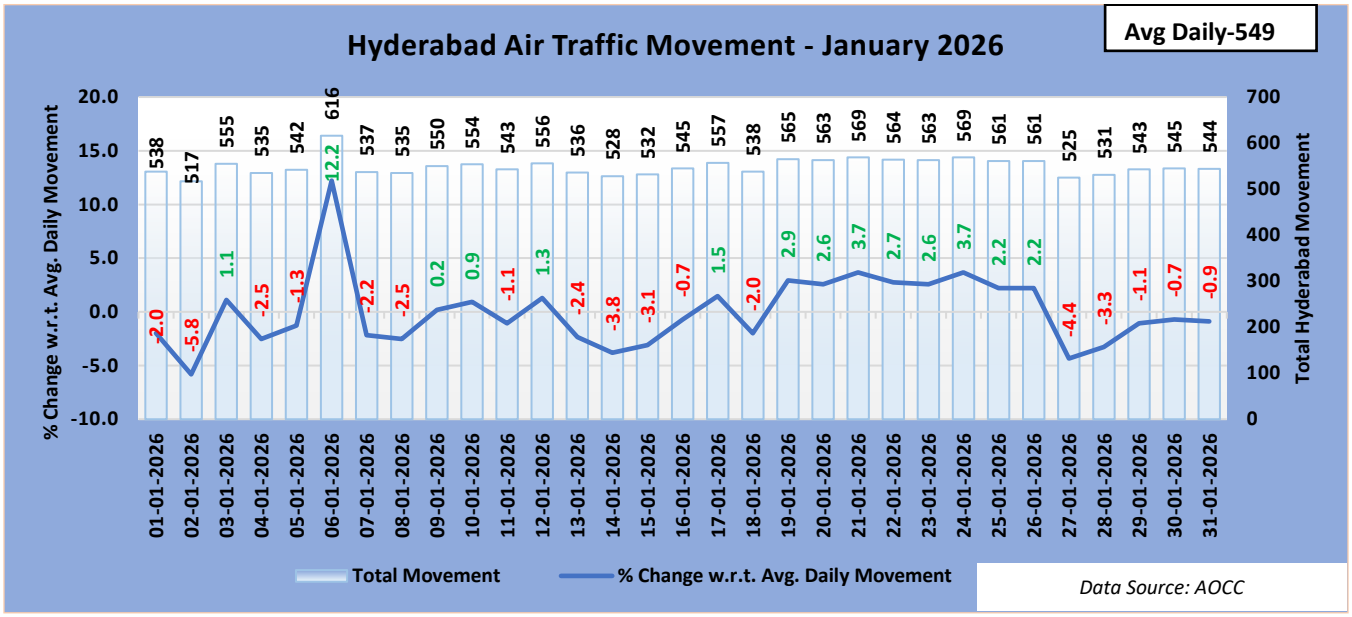


Figure 6: Air Traffic Movement for Hyderabad – Jan'26

It can be concluded from the above charts that the ATM at Delhi, Mumbai, Bengaluru and Hyderabad exceeds the average daily movement for 23 days, 16 days, 15 days and 14 days respectively in the month of January 2026.

**Note: Due operational constraints faced by Indigo.*

II. एटीएम की वार्षिक व मासिक तुलना/Comparison of total ATMs (YoY) and Monthwise

The total Air traffic movement(ATMs) including Passenger and other flights such as Cargo flights, International scheduled, International non-scheduled, Domestic scheduled, Domestic non-scheduled, Air taxi & commercial business flights at six major Indian Airports namely Delhi, Mumbai, Bengaluru, Hyderabad, Kolkata and Chennai is plotted for the month of January for two consecutive years 2025 and 2026 respectively. Air Traffic movement is also plotted Airline wise for the last six months for the major Scheduled Operators.

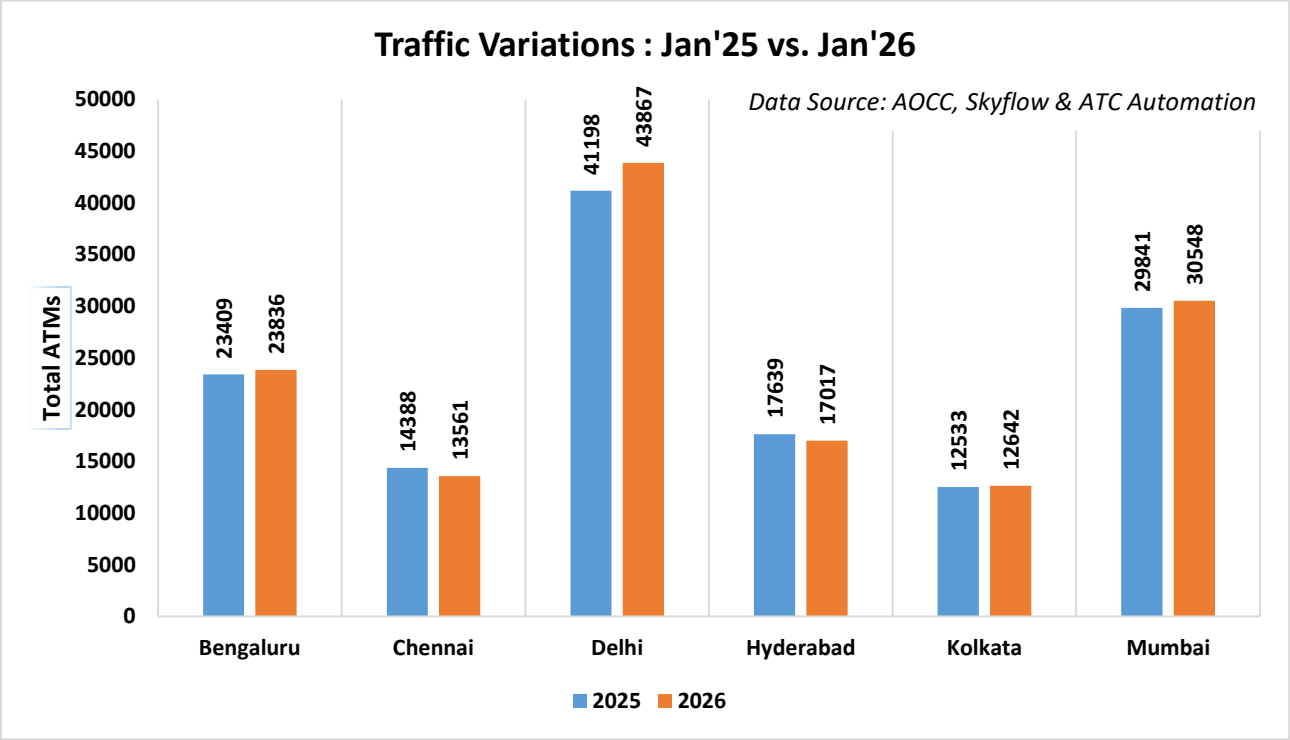


Figure 7: Traffic Variation (YoY)

III. उड़ान संचालन - एयरलाइन अनुसार/Flight Operations – Airlinewise

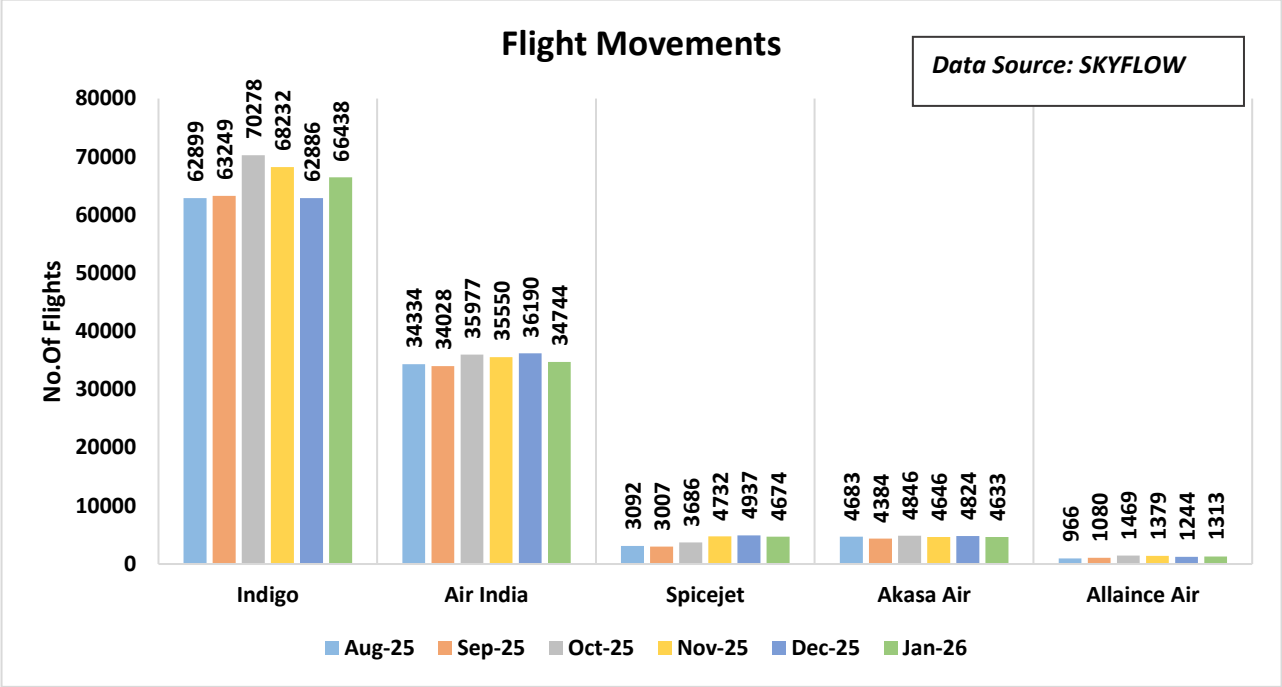


Figure 8: Flight Movements –Airlinewise

Inference:

1. Indigo, Air India nad Alliance Air have recorded an increase whereas Spicejet and Akasa has recorded a decrease in the monthly average(31 days) Flight movement in Jan'26 as compared to Dec'25.

C. सी.एटीएफएम पोस्ट ऑपरेशन - सीडीएम विश्लेषण

ATFM Post Operations – CDM Analysis

I. परिचय/Introduction

Analysis Period **1st – 31st January 26**

Back Ground During the above mentioned period**, Eight (08)** ATFM measures were applied **for Chennai Airport, Seven (07)** ATFM measures were applied **for Delhi Airport, Twenty Five (25)** ATFM measures were applied **for Mumbai Airport** due to the following reasons as illustrated in the bar chart below:–

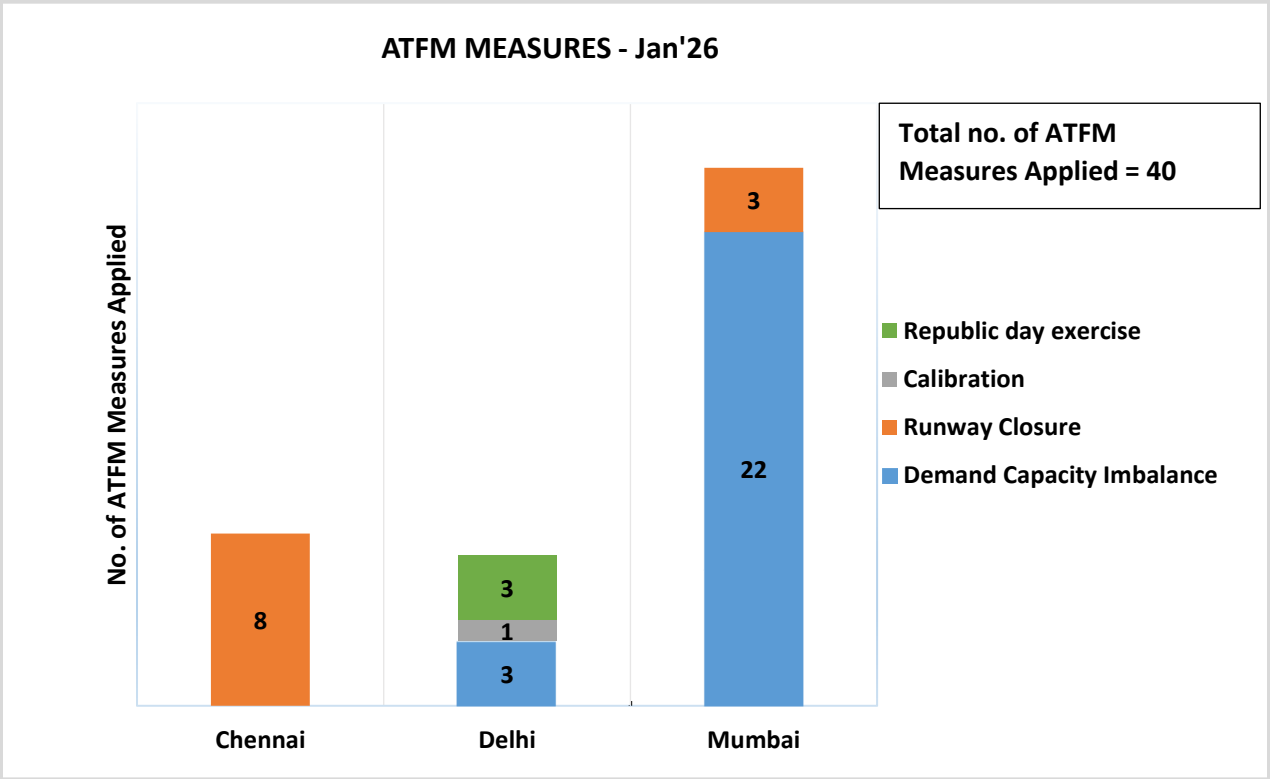


Figure 9: ATFM Measures –Jan'26

II. एटीएफएम मेजर्स का अवलोकन/ATFM Measures Overview

Constrained Airport	Chennai	Delhi	Mumbai
Number of ATFM measures applied	8	7	25
Average ATFM Ground delay(in min) due to measures*	28.4	23.6	30.3
Maximum ATFM Ground delay(in min) due to measures	55	92	87
% Compliance	100	98.6	98.9

Note: * $Average\ ATFM\ Delay = \frac{Total\ ATFM\ Delay}{Total\ Domestic\ Arrivals}$

Total Arrivals	2830
Total International Arrivals(exempted)	763
Total affected flights in scenario (Domestic Arrivals)	2067
Total Domestic Arrivals with zero ATFM delay	103
Total Domestic Arrivals with ATFM delay	1964

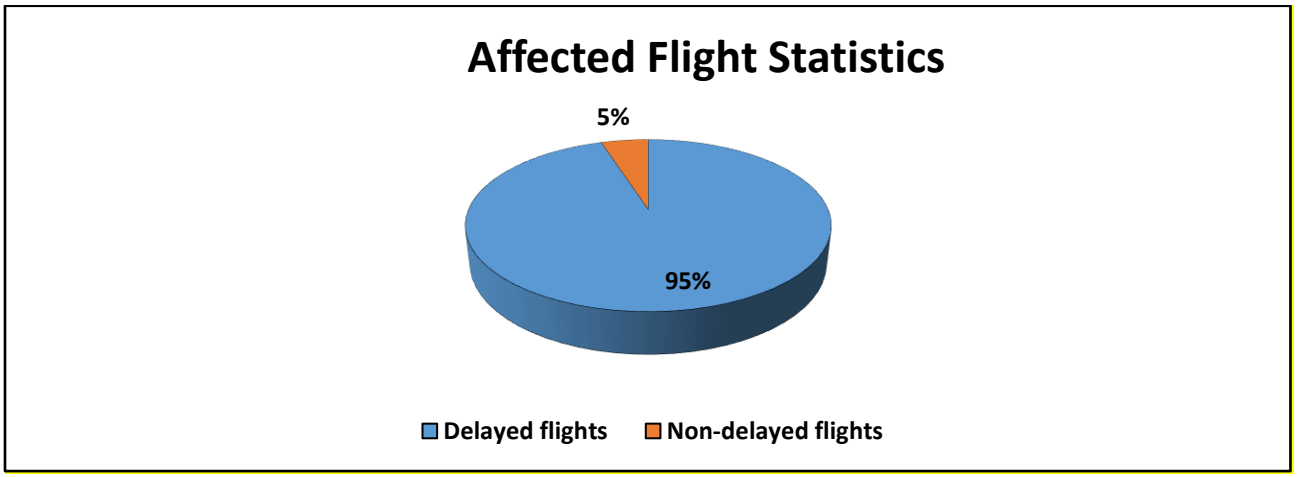


Figure 10: Affected Flight Statistics –Jan'26

III. समग्र अनुपालन/Overall Compliance

Total arrivals	2830
Domestic arrivals	2067
Flights with complete data (ATOT)	2067
Flights with incomplete data	0
Flights Not Operated	0
Compliant*	2044
Non-Compliant	23

*Total No. of Revised CTOTs issued = 828 (Compliance calculation for flights which were issued revised CTOT is w.r.t. new CTOT issued)

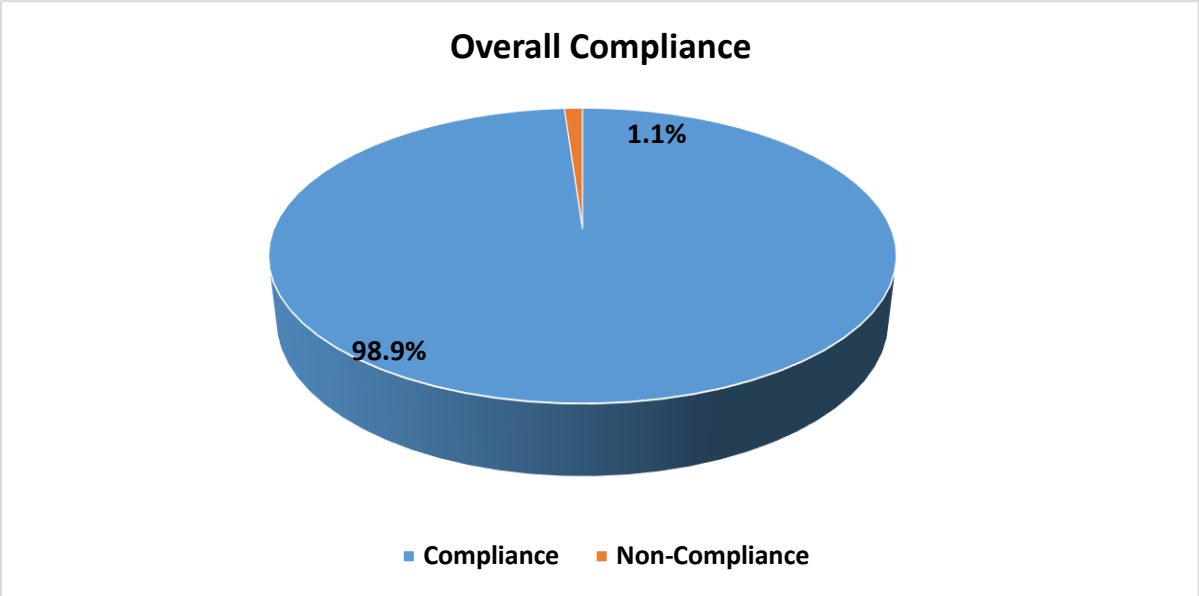


***Figure 11*: Overall Compliance – Jan'26**

NOTE: Flights with required data (i.e. ATOT) are only considered for compliance measurement.

Out of the total domestic arrivals with complete data in the CDM scenario, 98.9% arrivals are compliant for the month of January 2026.

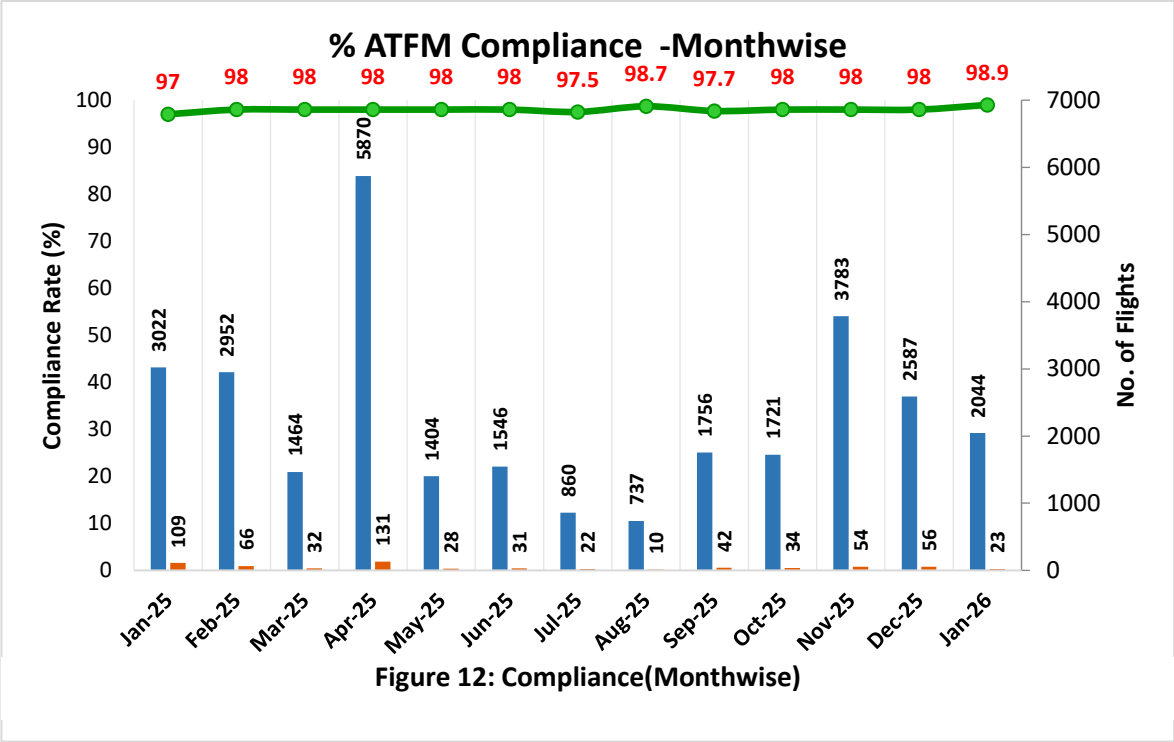


Figure 12: Compliance(Monthwise)

Inference

1. Out of the total arrivals captured(2830 flights) during the CDM scenario for the constrained Airports, 73% of flights i.e. domestic arrivals(2067 flights) were candidates for ground delay(participating).
2. Out of these Domestic Arrivals(2067), 95% (1964 flights) are assigned ATFM ground delay.
3. Out of the total arrivals captured(2830 flights) to the constrained Airport during the ATFM scenario, 69.4% of flights(1964 flights) were assigned ATFM Ground Delay.

IV. सीटीओटी अनुपालन दर -एयरपोर्टवाइज/CTOT Compliance rate – Airportwise

MUMBAI FIR (100%)*	Compliant	Non Compliant	% Compliant
Ahmedabad	86	0	100%
Amravati	1	0	100%
Aurangabad	11	0	100%
Mumbai	58	0	100%
Bhuj	3	0	100%
Vadodara	11	0	100%
Bhopal	15	0	100%
Diu	1	0	100%
Hirasar, rajkot	16	0	100%
Indore	32	1	97%
Jabalpur	4	0	100%
Jalgaon	2	0	100%
Jamnagar	10	0	100%
Kandla	2	0	100%
Navi Mumbai	8	0	100%
Nagpur	32	0	100%
Nasik	2	0	100%
Pune	11	0	100%
Shirdi	2	0	100%
Solapur	2	0	100%
Surat	14	0	100%
Udaipur	26	0	100%
KOLKATA FIR (98%)*	Compliant	Non Compliant	% Compliant
Prayagraj	6	0	100%
Agartala	2	0	100%
Ayodhya	8	0	100%
Siliguri	27	1	96%
Varanasi	41	0	100%
Bhubaneswar	41	0	100%
Kolkata	112	2	98%
Chakeri	2	1	67%
Durgapur	6	0	100%

Darbhanga	10	1	91%
Deoghar	2	0	100%
Gorakhpur	18	0	100%
Guwahati	32	0	100%
Gaya	6	0	100%
Hollongi	2	0	100%
Imphal	5	0	100%
Jharsuguda	4	0	100%
Jorhat	1	0	100%
Aizawl	1	2	33%
Dibrugarh	7	0	100%
Patna	45	0	100%
Purnea	1	0	100%
Ranchi	19	0	100%
Raipur	28	0	100%
Rewa	1	0	100%
DELHI FIR (98%)*	Compliant	Non Compliant	% Compliant
Amritsar	21	1	95%
Adampur	4	0	100%
Bikaner	3	0	100%
Bhuntar	2	0	100%
Beas	1	0	100%
Bathinda	1	0	100%
Chandigarh	25	2	93%
Dehradun	12	1	92%
Delhi	267	2	99%
Hindon	2	0	100%
Kangra	1	0	100%
Gwalior	5	0	100%
Jodhpur	11	0	100%
Jaipur	42	0	100%
Jaisalmer	4	0	100%
Jammu	20	0	100%
Leh	6	1	86%
Lucknow	37	0	100%
Pantnagar	3	0	100%
Srinagar	18	1	95%

CHENNAI FIR (99%)*	Compliant	Non Compliant	% Compliant
Hal Bangalore	2	1	67%
Bangalore	188	3	98%
Vijayawada	15	0	100%
Coimbatore	48	0	100%
INS GARUDA	1	0	100%
Kochi	73	0	100%
Calicut	4	0	100%
MOPA Goa	65	0	100%
Goa	77	1	99%
Hubli	1	0	100%
Shamsabad, Hyderabad	102	0	100%
Begumpet Hyderabad	2	0	100%
Vijaynagar	0	1	0%
Madurai	19	0	100%
Mangalore	17	0	100%
Chennai	96	1	99%
Port Blair	27	0	100%
Rajahmundry	1	0	100%
Salem	1	0	100%
Tuticorin	8	0	100%
Tirupati	6	0	100%
Tiruchirappally	7	0	100%
Thiruvananthapuram	19	0	100%
Visakhapatnam	4	0	100%

**FIR wise compliance rate (decimals rounded off to nearest integer value).*

Note: The above list contains only those airports which had flights to the Constrained Airport and are affected by ATFM measures.

Airports with % compliance less than the average compliance(99%) for the month are highlighted in red.

V. सीटीओटी अनुपालन दर- एयरलाइनवाइज़/CTOT Compliance rate – Airlinewise

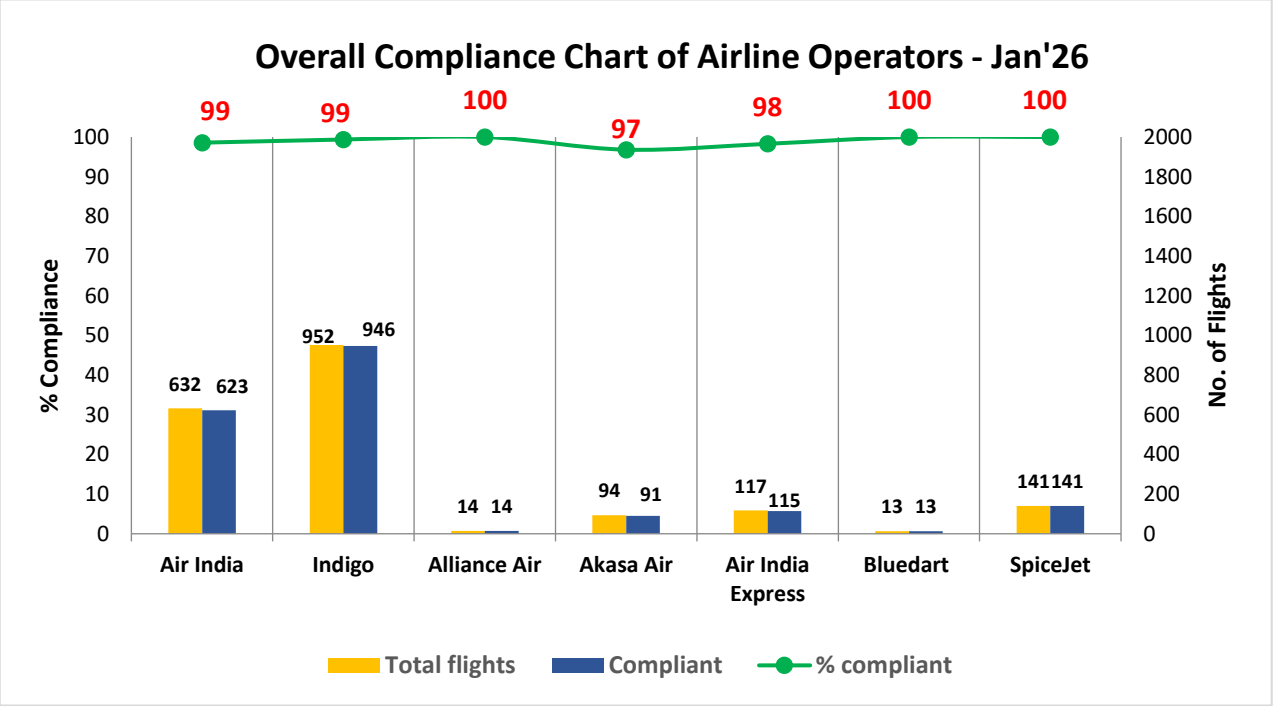


Figure 13: Airline wise Compliance –Jan'26

Inference

1. Mumbai region record the highest compliance of 100% whereas Delhi and Kolkata region has the lowest percentage compliance of 98%.
2. Indigo, Air India,Alliance Air, Spicejet and Blue Dart have a CTOT compliance higher than or equal to the average recorded compliance for the month of January 2026.

VI. गैर-अनुपालन का कारण/Reason For Non Compliance

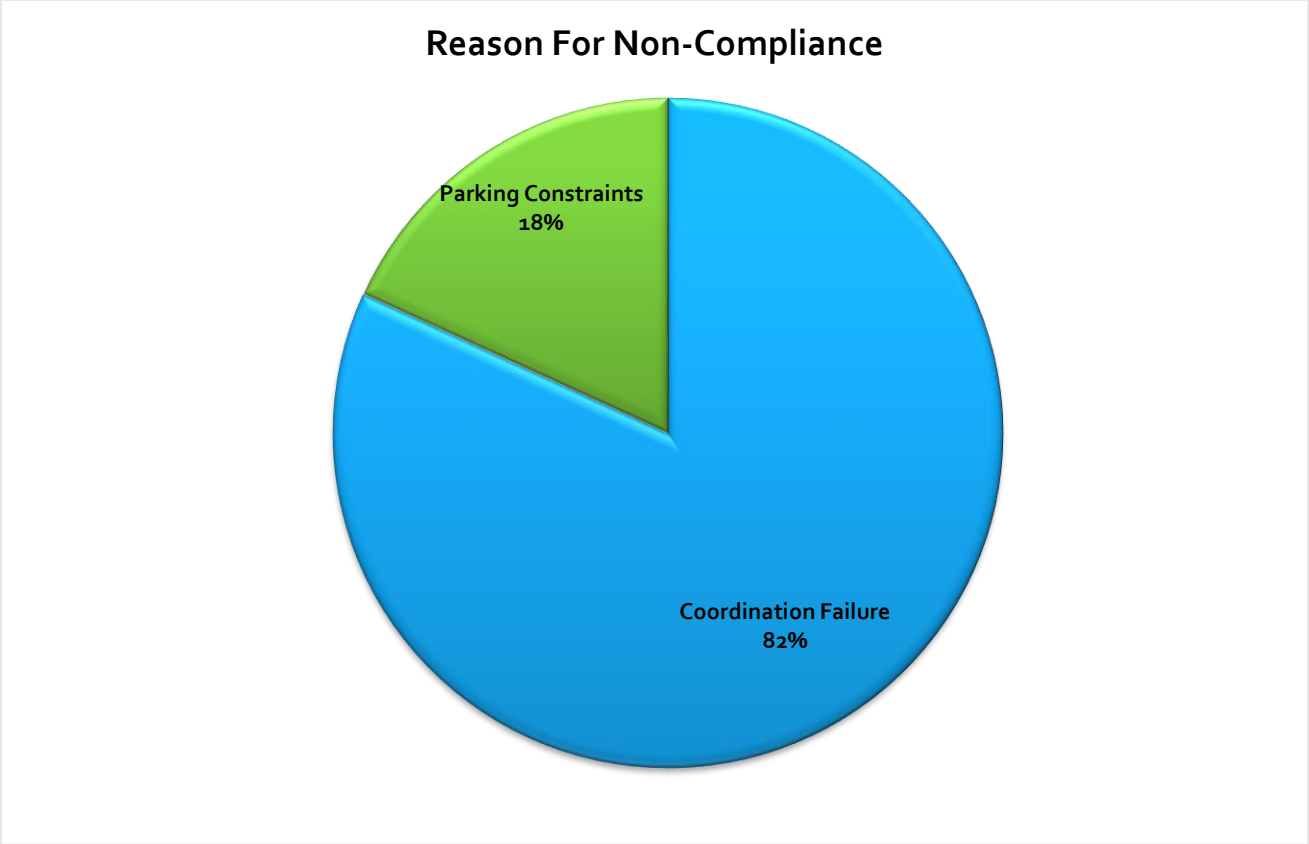


Figure 14: Reason for Non-Compliance as provided by FMPs

Inference:

1. 82 % of CTOT Non- Compliance was reported by concerned FMPs to be due to coordination failure between FMP and Station.
2. 18 % of the CTOT Non- compliance was due to parking constraints at the concerned station

VII.सीडीएम परिदृश्य अवधि के दौरान वायु विलंब/Air Delay during the CDM Scenario period

Average Air Delay to domestic arrivals* within the CDM Scenario period for Chennai, Delhi and Mumbai was 4.9, 16.9 and 13.6 minutes respectively.

**Note: Only calculated for domestic arrivals with both ATOT and ALDT information*

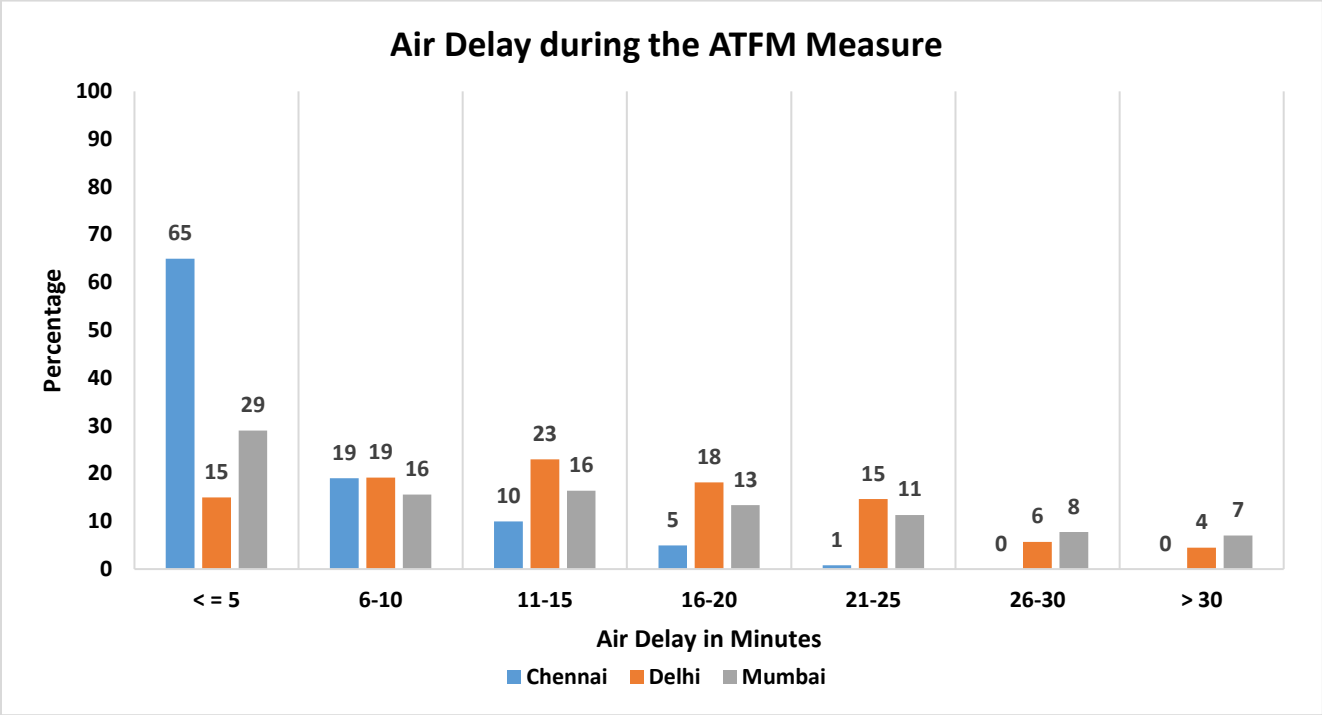


Figure 15: Air Delay distribution during the CDM period

Inference

1. 84% of domestic arriving flights to Chennai had an Air delay of equal to or less than 10 minutes during the CDM period.
2. 34% of domestic arriving flights to Delhi had an Air delay of equal to or less than 10 minutes during the CDM period.
3. 45% of domestic arriving flights to Mumbai had an Air delay of equal to or less than 10 minutes during the CDM period.

VIII. एटीएफएम उपायों के कारण मूर्त लाभ/Tangible Benefits due to ATFM Measures

A modest attempt is made to find out the tangible benefit of ATFM measures applied.

Assumptions:

•When ATFM measures are not in force, all flights take off at their ETOT where Estimated take off time(ETOT)= Estimated off block time(EOBT) + default taxi time

•All flights have an Estimated elapsed time(EET) as calculated by SKYFLOW using the Flight Plan information and Basic Aircraft data.

Methodology:

Air delay (with ATFM measures in force) is calculated during the period when ATFM measures are in force by summing the air delay for all the flights landing at constrained Airport.

i.e. **Total Air Delay = ∑ (Actual Flying time – SKYFLOW calculated EET)**

Air delay (with no ATFM measures) is calculated as the sum of Air delay for all the flights during the above said period with no ATFM measures in place and the air delay for each flight is the difference in its ideal landing time and its ideal estimated landing time.

Total Air Delay (with no ATFM measures) = **∑ (Ideal LDT - Ideal ELDT)**

*Ideal LDT is taken by assuming every flight is landing at a specified interval based on the Arrival acceptance rate(AAR) defined,

*Ideal ELDT = ETOT + SKYFLOW calculated Flying time

Fuel Saving Calculation :

Great Circle Distance(GCD)* was calculated for all the arrivals during the ATFM Measure from the point of origin to destination. Assuming Airbus 320 as reference aircraft for flights (flight distance equal to or less than 3000 nm) and B777 for international flights (flight distance more than 3000nm):

Fuel consumption (Kgs / nm) for each affected flight in the scenario was then calculated using the Reference document: ICAO Carbon emissions calculator methodology, version10, Appendix C: ICAO Fuel Consumption Table.

The Fuel consumed per minute(Kg/min) was calculated for each affected flight.

Total Air Delay(with ATFM Measures)= 34664 mins

Total Air Delay (with no ATFM measures) = 51900 mins

Reduction in Air delay due to ATFM measures= (51900-34664) = **17236 mins**

Fuel Saving Calculation:

Total Fuel saved during the ATFM Measure: ***1,28,4445.71 Kg***

Total reduction in CO_2 emission : 3.16(KgCO_2/kg fuel)* 1,28,4445.71 **Kg** ***= 4058848.44 Kg***

**GCD (Great Circle Distance): The distance between origin and destination airports is derived from latitude and longitude coordinates originally obtained from ICAO Location Indicators database.*

3.16 = constant representing the number of tonnes of CO2 produced by burning a tonne of aviation fuel.

D. शब्दकोश/**Glossary**

ATFM Parameters	**Definition**
Affected Flight statistics	An insight of participating traffic in the scenario i.e. ratio of the domestic arrivals to the constrained airport affected by ATFM measures (assigned delay by the Ground Delay Program) to the domestic arrivals not affected by ATFM measures (not assigned any delay) within the CDM scenario.
ATFM Ground delay	ATFM ground delay defined as CTOT-ETOT (Calculated take off time – Estimated take off time)
Average ATFM delay	$\frac{\boldsymbol{Total\ monthly\ ATFM\ delay\ (in\ minutes)}}{\boldsymbol{Total\ Domestic\ Arrivals}}$
Maximum ATFM delay	Maximum ATFM delay (in minutes) assigned in the month
Overall compliance rate	Defined as monthly ATFM departure slot adherence rate of regulated flights. Flights having ATOT within theATFM Slot Tolerance Window (STW) of minus 5 to plus 10 minutes of CTOTs, are considered as compliant flights
CTOT Compliance rate of Airline operators	An overview of CTOT compliance rate of various Airline operators
CTOT Compliance rate of Airports within different Regions	An overview of CTOT compliance rate of Airports within 4 FIRs
Air delay statistics	Air delay defined as difference between AET & EET, whereAET(actual elapsed time) can be obtained from (ALDT-ATOT) and estimated elapsed time(EET)can be obtained from FPL/RPL or (CLDT-CTOT). **Therefore, Air delay = AET-EET** Average Air Delay is calculated as: $\boldsymbol{Average\ Air\ Delay} = \frac{\boldsymbol{Total\ Air\ Delay\ to\ domestic\ arrivals\ (with\ values\ greater\ than\ zero)}}{\boldsymbol{Total\ Domestic\ Arrivals}}$ *CLDT: Calculated Landing Time* *CTOT: Calculated Take off Time* *ALDT: Actual Landing Time* *ATOT: Actual Take off Time*

Annexure-A

एयरलाइनों द्वारा सामान्य व्यावसायिक नियमों (सीबीआर) की उड़ान योजना आवश्यकताओं का अनुपालन - जनवरी 2026

Compliance by Airlines with Flight Planning Requirements of Common Business rules(CBR)- January 2026.

I. Introduction:

Accurate and timely input in respect of flight intent is paramount to the correct traffic demand projection and eventually effective ATFM implementation. FPLs remain the main source of tactical demand prediction for ATFM systems. Early filing of error free FPL helps in improving the lead time required for ATFM measures and reduces the number of unexpected flights(pop-up). This in turn helps in improving the accuracy of demand-capacity imbalance prediction and optimizes slot utilization.

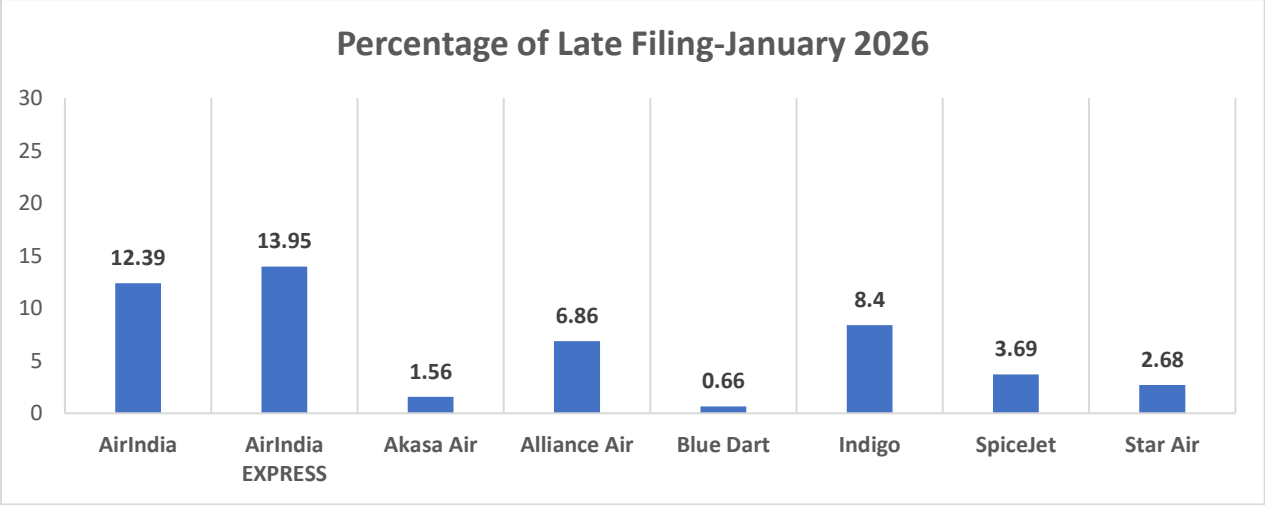
AIP India, ENR 1.9 section 4 on Flight Planning in the context of ATFM recommends Flight Planning requirements for all Airline Operators –

a) Flight plans shall be submitted at least 3 hours before the estimated off block time (EOBT);
b) The window for filing FPL is between 3 Hours and 120 Hours (Five days) before the EOBT. Earlier filing of FPL will give a realistic demand data to the CCC and hence the requirement of ATFM measures can be identified early for better planning. Late filing of a flight plan will lead to inaccuracies in predicting the demand and may lead to undesirable delay;"

II. Analysis

A. An analysis has been conducted to find out the difference between the flight plan filing time and filed EOBT for all the FPLs received at ATFM system from 1st January 2026 to 31st January 2026.
The purpose of the analysis is to monitor the compliance with provisions of AIP India, section 4, ENR 1.9 regarding Flight Planning requirements in context of the ATFM.

This flight plan filing requirement has been reiterated through the recently agreed ATFM common business rules (CBR) document and is recognized as a metrics to be monitored regularly for any improvement.



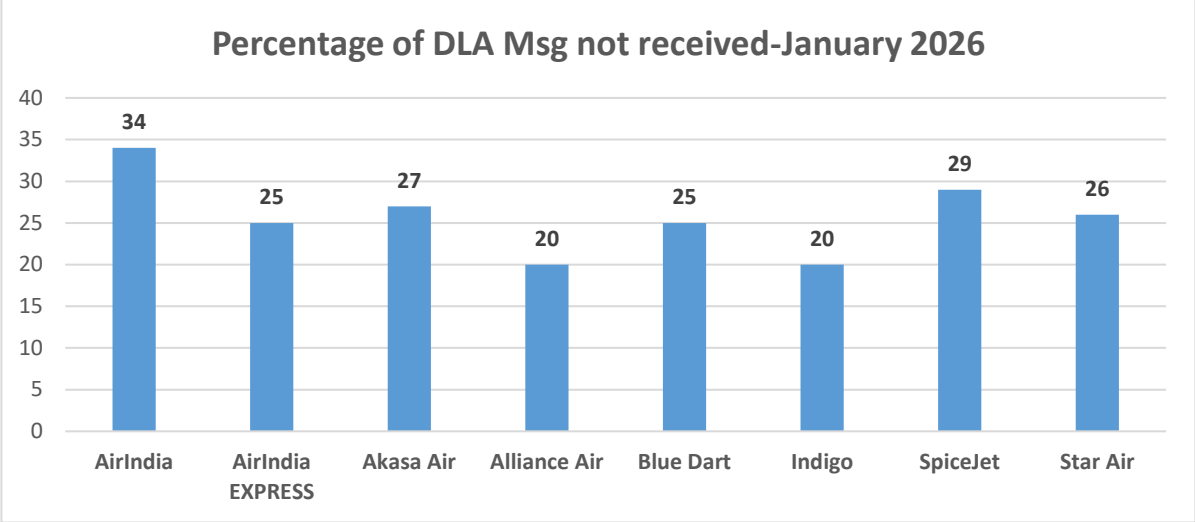
The table below lists number of filed flight plans (FPLs) with less than 3 Hours prior to EOBT:

Name of Airline	Late Filed FPL	Total No. Of FPL	% Delayed Filing
AirIndia	2552	20603	12.39
AirIndia EXPRESS	2077	14894	13.95
Akasa Air	75	4818	1.56
Alliance Air	92	1341	6.86
Blue Dart	4	603	0.66
Indigo	5626	67012	8.40
SpiceJet	181	4906	3.69
Star Air	45	1682	2.68
Total no. of FPLs for Scheduled Airlines	**10652**	**115859**	**9.19**

B. For the analysis of non-receipt of DLA (Delay) messages for flight plans filed, the EOBT of FPL received has been compared with Actual Take off time (ATOT)received through DEP(Departure)messages.
Thus, only those FPLs were considered for analysis for which DEP messages were available and no associated DLA messages was received.

The Table below lists number of flights for which no DLA message was received in January 2026. **{(EOBT of original FPL)- (ATOT received)} > 30 minutes)**

Name of Airline	DLA Message not received	Total No. of flights considered for analysis	% of flights for which no DLA message was received
AirIndia	5330	15867	34
AirIndia EXPRESS	2095	8548	25
Akasa Air	725	2677	27
Alliance Air	116	570	20
Blue Dart	113	450	25
Indigo	9208	46240	20
SpiceJet	759	2611	29
Star Air	111	432	26



C. For analysis of non-receipt of CNL (cancel) messages for January 2026, annulled FPLs were considered for which no CNL/DEP/DLA messages were received. A FPL gets annulled in SKYFLOW system, if it doesn't get activated through Dep message /surveillance data/ manual activation by FMP within a defined system parameter.

The table below lists the number of Flights for which no CNL Msg. was received in January 2026:

Name of Airline	**CNL message not received**	**No. of flights annulled**
AirIndia	54	60
AirIndia EXPRESS	60	66
Akasa Air	10	11
Alliance Air	80	84
Blue Dart	1	1
Indigo	266	290
SpiceJet	19	22
Star Air	26	27

Annexure-B

बंगाल की खाड़ी सहयोगी वायु यातायात प्रवाह प्रबंधन (बीओबीसीएटी): अनुपालन रिपोर्ट जनवरी 2026

Bay of Bengal Co-operative Air Traffic Flow Management (BOBCAT): Compliance Report January 2026.

I. Introduction:

On 24 July 2006, the States of the ICAO Asia/Pacific Region within the Bay of Bengal, South Asia and Pakistan airspace implemented an operational trial of an automated Air Traffic Flow Management (ATFM) service under the auspices of the ICAO Bay of Bengal ATS Coordination Group - ATFM Task Force. Pursuant to comprehensive reviews of the performance of the operational trial by the ATFM Task Force, ATFM procedures were permanently implemented.
Bay of Bengal cooperative ATFM system (BOBCAT), services were temporarily suspended since 08th September 2021, due to the absence of Enroute overflight Air Traffic Service (ATS) in Afghanistan airspace (Kabul FIR) and lack of traffic demand to operate through the Kabul FIR.

The States of the ICAO Asia/Pacific Region, which have westbound night time flights operating through the Kabul FIR between 2000 UTC to 2359 UTC, re-activated the integrated Air Traffic Flow Management (ATFM) service using the BOBCAT wef 04 September 2025. However, enroute ATS service in the Kabul FIR remain unavailable. Aircraft's are operating through Kabul airspace via designated routes using Traffic information broadcast by aircrafts (TIBA) with larger longitudinal separation of 15 minutes.

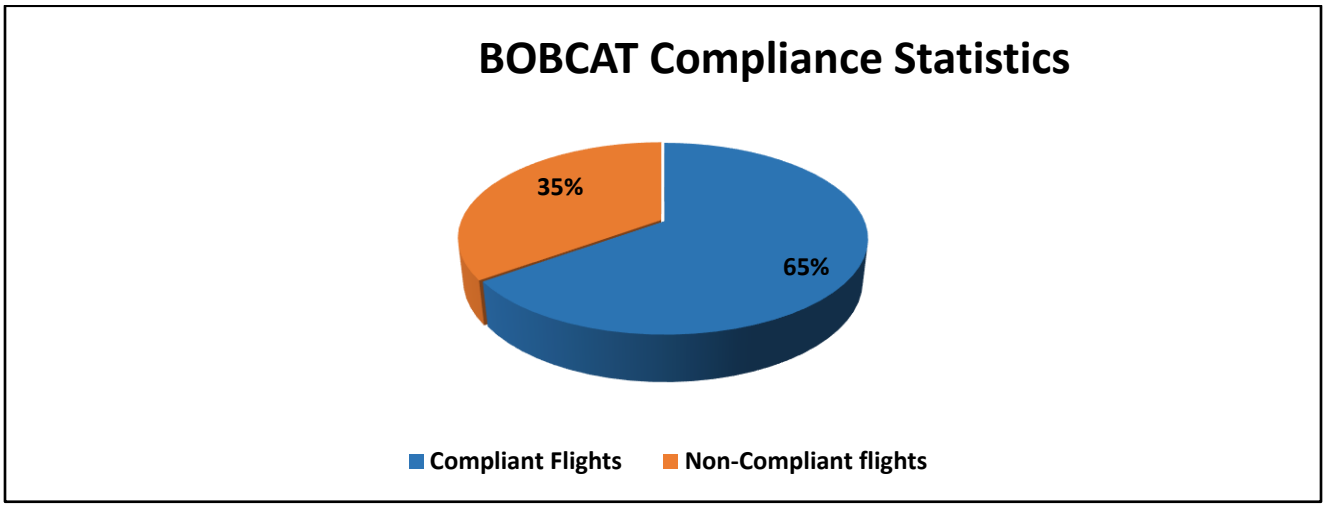
India is also part of BOBCAT reactivation group. Accordingly, AAI has also published AIP supplement 139 of 2025 effective from 04.09.2025 for the reactivation of Bay of Bengal Cooperative Air Traffic Flow Management (BOBCAT) Procedures and Implementation of BOBCAT Services. The cited AIP supplement contains the detailed processes, procedure, and duties and responsibilities of the stakeholders.
The cited AIP supplement is complimented by NOTAM G-325 issued by Kabul FIR OAKX and/or any subsequent relevant NOTAM issued by Kabul FIR OAKX.

II. Analysis:

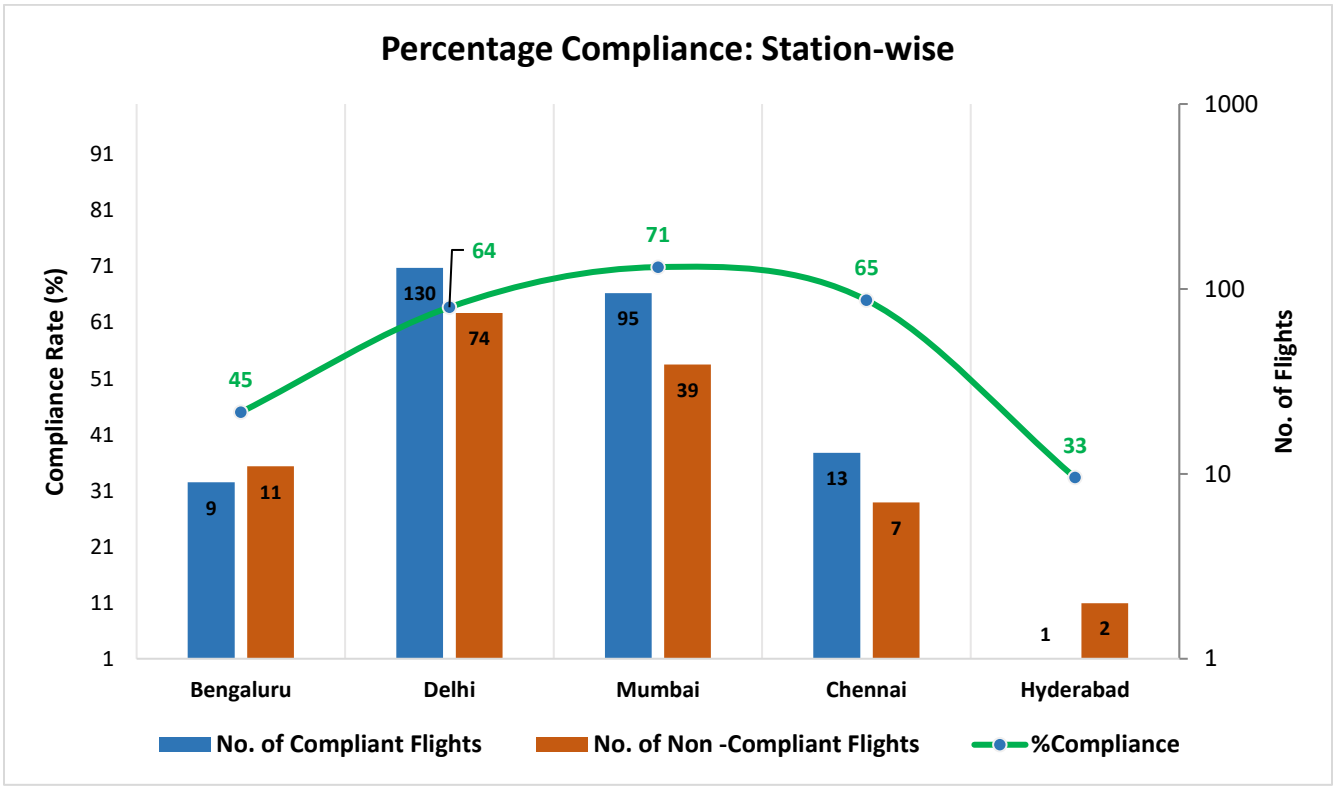
The compliance analysis is performed only for departures from India participating in the BOBCAT. As it is an airspace program the compliance window for the same is from -5 minutes to +5 minutes of the CTOTs issued.

No. of Compliant Flights	No. of Non- Compliant Flight	Total
248	133	381

A) BOBCAT Compliance Overview:

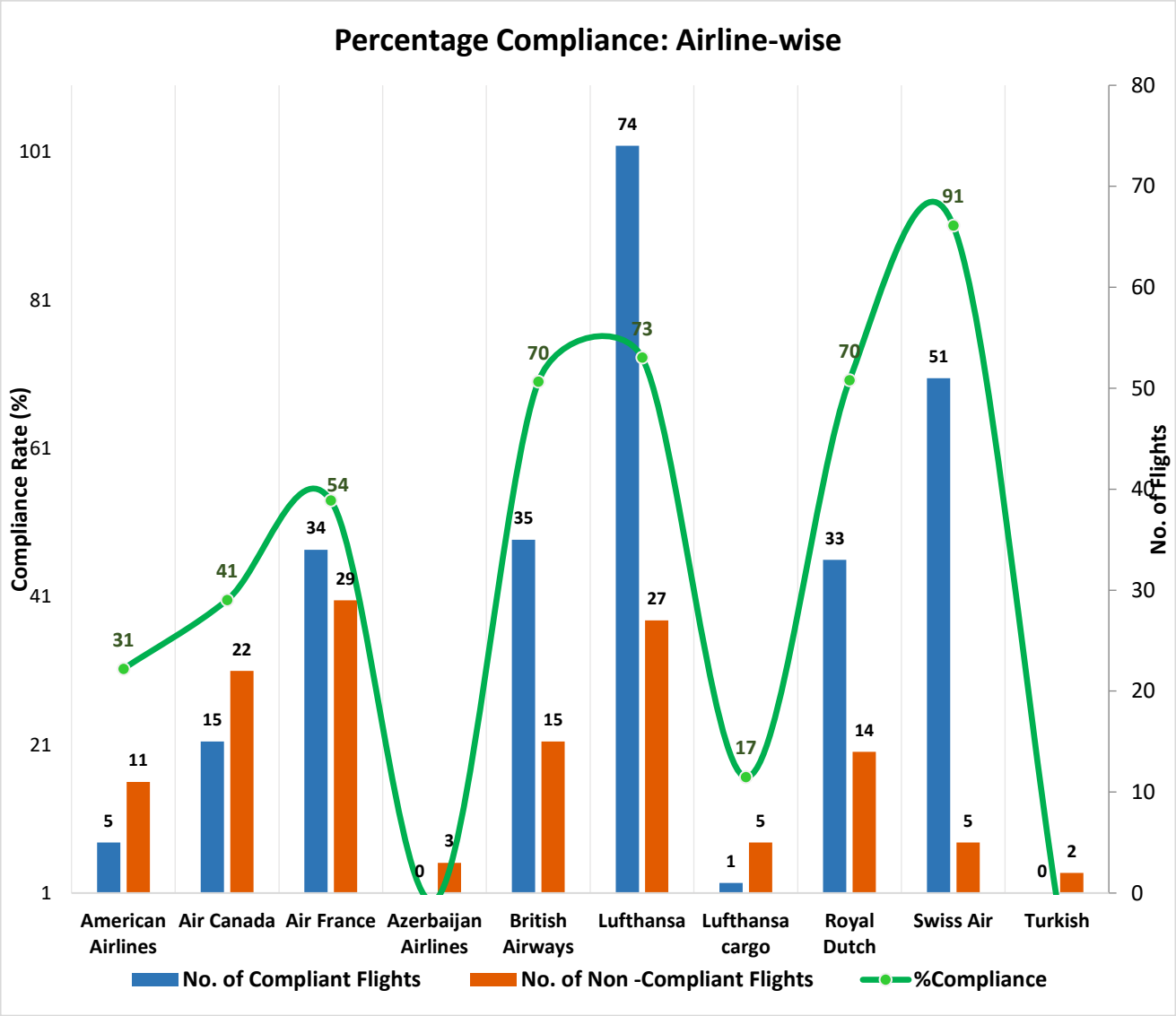


B) Station Wise Compliance:



	Bengaluru	Delhi	Mumbai	Chennai	Hyderabad
No. Of Compliant Flights	9	130	95	13	1
No. of Non-Compliant Flights	11	74	39	7	2
Compliance %	45	64	71	65	33

C) Airline wise Compliance:



Annexure-C

CASE STUDY

Republic Day Airspace Closure(2026)

A. Introduction:

Due to the Republic Day celebrations, Delhi Airport/Airspace was closed as specified vide NOTAM no. A0078/26, A0077/26, A0073/26, A0069/26, A0068/26, A0066/26, and A0070/26.

(**A0078/26** NOTAMN
Q) VIDF/QWLLW/IV/BO/W/000/999/2837N07713E015
A) VIDF B) 2601260600 C) 2601260815
E) ABT 2500 X 3 NON-INFLAMMABLE HELIUM GAS FILLED SMALL TRI-COLOURED BALLOONS EACH WEIGHING 20GRAM HAVING MINIMUM BURSTING CIRCUMFERENCE OF 2.8M (PLUS MINUS 0.2M) AND 15 X 3 BIG WHITE BALLOONS EACH WEIGHING 350GRAM HAVING BURSTING CIRCUMFERENCE OF 6M (APRX) WITH TRI-COLOUR BUNTINGS AND A LABEL WITH ENCRYPTION VANDE MATARAM RELEASED FM LCA 283651N0771310E.
THE TRAJECTORY OF THESE BALLOONS IN THE AIR WILL DEPEND ON THE DIRECTION AND SPEED OF PREVAILING WIND AT THAT TIME. THE WINDS EXP TO BE WESTERLY EXC DRG TRAVERSE OF A WESTERN DISTURBANCE, WHEN THE WINDS OF LOWER LVL UPTO 10,000FT MAY CHANGE TO SOUTH EASTERLY/SOUTH WESTERLY DIRECTION.
THESE BALLOONS LIKELY TO AFFECT AIRSPACE WI RADIUS OF 25KM (APRX) WITH 283651N0771310E AS CENTRE AND MAY RISE UPTO 30KM WITH RATE OF ASCENT 14-18KMH. THESE BALLOONS EXP TO REMAIN IN THE SPACE FOR ABOUT 2HR FM THE TIME OF RELEASE.
F) GND G) UNL)

(**A0077/26** NOTAMN
Q) VIDF/QWLLW/IV/BO/W/000/999/2837N07713E015
A) VIDF B) 2601230600 C) 2601230815
E) ABT 500 X 3 NON-INFLAMMABLE HELIUM GAS FILLED SMALL TRI-COLOURED BALLOONS EACH WEIGHING 20GRAM HAVING MINIMUM BURSTING CIRCUMFERENCE

OF 2.8M (PLUS MINUS 0.2M) AND 2 X 3 BIG WHITE BALLOONS EACH WEIGHING 350GRAM WITH TRI-COLOUR BUNTINGS AND A LABEL WITH ENCRYPTION VANDE MATARAM, HAVING BURSTING CIRCUMFERENCE OF 6M (APRX)) RELEASED FM LCA 283651N0771310E.
THE TRAJECTORY OF THESE BALLOONS IN THE AIR WILL DEPEND ON THE DIRECTION AND SPEED OF THE PREVAILING WIND AT THAT TIME. THE WINDS EXP TO BE WESTERLY EXC DRG TRAVERSE OF WESTERN DISTURBANCE, WHEN THE WINDS OF LOWER LVL UPTO 10,000FT MAY CHANGE TO SOUTH EASTERLY/SOUTH WESTERLY DIRECTION.
THESE BALLOONS LIKELY TO AFFECT AIRSPACE WI RADIUS OF 25KM (APRX) WITH 283651N0771310E AS CENTRE AND MAY RISE UPTO 30KM WITH RATE OF ASCENT 14-18KMH. THESE BALLOONS EXP TO REMAIN IN THE SPACE FOR ABT 2HR FM THE TIME OF RELEASE.
F) GND G) UNL)

(**A0073/26** NOTAMN
Q) VIDF/QWPXX/IV/BO/W/000/999/2834N07707E054
A) VIDF B) 2601260030 C) 2601291530
D) 26 29 0030-1530
E) DUE REPUBLIC DAY CELEBRATIONS,OPS OF HANG-GLIDERS, PARA-GLIDERS, PARA-MOTORS, AERO-MODELS, ALL TYPES OF DRONES AND SIMILAR SHORT RANGE AERIAL VEHICLES NOT PERMITTED WI 100KM AROUND DELHI.
F) GND G) UNL)

(**A0069/26** NOTAMN
Q) VIDF/QRACA/IV/NBO/W/000/200/2834N07707E050
A) VIDF B) 2601210500 C) 2601260715
D) DLY 0500-0715
E) AIRSPACE WI RADIUS OF 50NM AROUND DELHI VOR (DPN), EXCLUDING AREAS OF 10NM RADIUS AROUND SIKANDRABAD VOR (SSB, DPN108034) AND 10NM AROUND SAKRAS VOR (SKA, DPN188044) NOT AVBL DUE REPUBLIC DAY CELEBRATIONS.
F) GND G) FL200)

(**A0068/26** NOTAMN
Q) VIDF/QWUXX/IV/BO/W/000/999/2834N07707E162
A) VIDF B) 2601260030 C) 2601291530
D) 26 29 0030-1530
E) DUE REPUBLIC DAY CELEBRATIONS, OPS OF LIGHT/MICRO LIGHT ACFT, UNMANNED AERIAL VEHICLE(UAV) AND SIMILAR LONG RANGE AERIAL VEHICLES

FM FLYING CLUBS AND OTHER AIRPORTS NOT PERMITTED WI 300KM ZONE
AROUND DELHI. STATE OWNED LIGHT ACFT FLYING THE GOVERNOR OR THE
CHIEF MINISTER OF STATE EXEMPTED FM THE RESTRICTIONS.
F) GND G) UNL)

(**A0066/26** NOTAMN
Q) VIDF/QRACA/IV/NBO/W/000/999/2834N07707E162
A) VIDF B) 2601260300 C) 2601291330
D) 26 0300-0730 0930-1230, 29 0930-1330
E) 1. IN CONNECTION WITH REPUBLIC DAY CELEBRATIONS(RDC), NO OTHER
FLT PERMITTED TO TKOF/LAND, AT INDIRA GANDHI INTERNATIONAL AP (VIDP)
AND SUBSIDIARY AIRPORTS WI A RADIUS OF 300KM AROUND DELHI EXC FLW
FLT :
A. SKED FLIGHTS BY THE SKED FLT OPR.
B.INDIAN AIR FORCE (IAF), BORDER SECURITY FORCE (BSF) AND AVIATION
RESEARCH CENTRE (ARC) FLT.
C. ARMY AVIATION HEL FLT UNDERTAKING AIRBORNE QUICK RESPONSE TEAM
(QRT) MISSIONS AND CASUALTY/IMMEDIATE MEDICAL EVACUATION.
D.STATE OWNED ACFT /HEL FLYING THE GOVERNOR OR THE CHIEF MINISTER OF
A STATE.
2. SKED FLT BY SKED OPR ON ATS ROUTES ARE PERMITTED TO OVERFLY A
ZONE OF 300KM RADIUS AROUND DELHI EXC VIP89 ABOVE FL290. IN ADDN,
FLT INTENDING TO TKOF OR LAND FM/AT A SUBSIDIARY AIRFIELD LOCATED
BEYOND 300KM FM DELHI WHILE CLIMBING SHALL ATTAIN FL290 BY 200KM TO
DELHI AND WHILE DESCENDING SHALL COMMENCE DESCEND FM FL290 AT A DIST
OF 200KM OR MORE FM DELHI.
3. SAFDARJUNG AP(VIDD) SHALL REMAIN CLSD EXC FOR THE IAF HEL, WHICH
MAY BE DEPLOYED FOR FLYPAST ACTIVITIES DRG RDC-2026, EMERGENCY DUTY
OR VIP DUTY AND BSF/IAF HEL UTILIZED BY NATIONAL SECURITY GUARD
(NSG) FOR PROVIDING IMMEDIATE BACK UP SUPPORT (IBUS).
4. ROHINI HLP (2845N07703E) SHALL REMAIN CLSD.
5. APART FROM THE FLT MENTIONED ABV, OTHER FLT WOULD REQUIRE PRIOR
SECURITY CLR FM MINISTRY OF HOME AFFAIRS.
EMAIL ID : ANIL.SUB(A)NIC.IN, SANJAY.SHARMA67(A)NIC.IN,
USVS-MHA(A)NIC.IN
F) GND G) UNL)

(**A0070/26** NOTAMN
Q) VIDF/QFAXX/IV/BO/A/000/999/2834N07707E005

A) VIDP B) 2601210450 C) 2601260715
D) DLY 0450-0715
E) NO LDG AND TKOF PERMITTED AT IGI AP, NEW DELHI (VIDP) DUE REPUBLIC DAY CELEBRATIONS.)

B. Executive Summary

A virtual meeting was conducted on 20th Jan'26 with all stakeholders' including senior officers from Delhi ATC to discuss the modalities for the upcoming Delhi Airspace/Airport closure and review last year's Airspace closure to identify bottlenecks and resolve them and incorporate best practices.

It was agreed that no ATFM measure would be applied pre Closure and Delhi ATC will tactically manage the traffic.Revised schedule as approved by DIAL was already available with ATFM team..

A representative from Air India & Indigo Airlines was present in CCC for all days of the Republic Day Airspace closure. Their presence helped in timely and effective coordination with the Flight dispatch and operations.

All ATS in-charges/FMPs were informed to be abreast with the latest NOTAM w.r.t. republic day celebration and ensure that FMP position was manned by SKYFLOW trained staff. CCC apprised all FMPs regarding the availability of CTOTs through the SKYFLOW system through planned Teleconferencing conducted on each day of the exercise.

Exercise was called off on 22nd & 23rd Jan'26 by Indian Airforce.

C. Challenges:

1. During preclosure meeting Airlines raised the issue of IAF MLU, using issuance of ADC number for regulating the flight. ATM IGIA Delhi assured that issue will be pursued with IAF MLU for resolution. However, during flypast days, Airlines reported that various IAF MLU Ahemdabad, Chennai, Kolkata etc continued to cancel the ADC numders for regulating the flights.
   ATM IGIA Delhi in collaboration with ASM dte. has been requested to collaborate with IAF for not using issuance of ADC number for regulating the flight during such flypast or events. As compliance of flypast restrictions are ensured by the AAI-ATM.
2. CTOT dissemination to smaller Airports (under the Regional Connectivity Scheme) still remains a challenge. However, all the stations contributed for successful airspace closure on 26 January 2026 resulting in successful compliance.
3. Two international flights, one schedule and one non schedule came during closure period on one of the closure day. Both were accmodated by ATM IGIA Delhi in coordination with IAF and DIAL.
4. The revised profile schedule considering the closure and and associated NOTAM should be available with stakeholders atleast 15 days in advance.

D. Highlights:

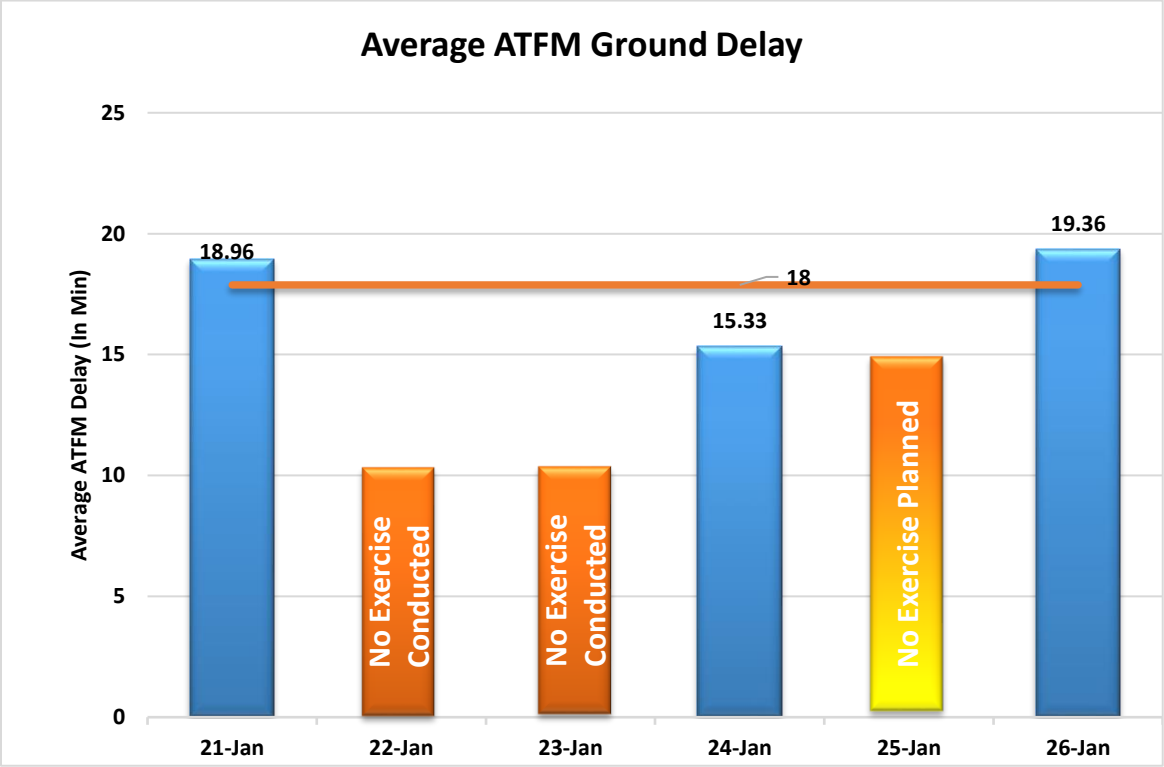
1. Stakeholder's meeting prior to the closure helped in raising awareness about the applicable NOTAM and proposed ATFM measures.
2. Better coordination with Delhi ATC as per the agreed plan. Pre closure traffic was handled tactically by Delhi ATC as agreed in Stakeholders Meeting and hence no measure was applied.
3. Presence of Airline representatives from 2 major Airlines helped in communication flow.
4. Regulated flow of Air traffic to Delhi ATC post the reopening of Airspace ensured less airborne holdings.

E. Overview:

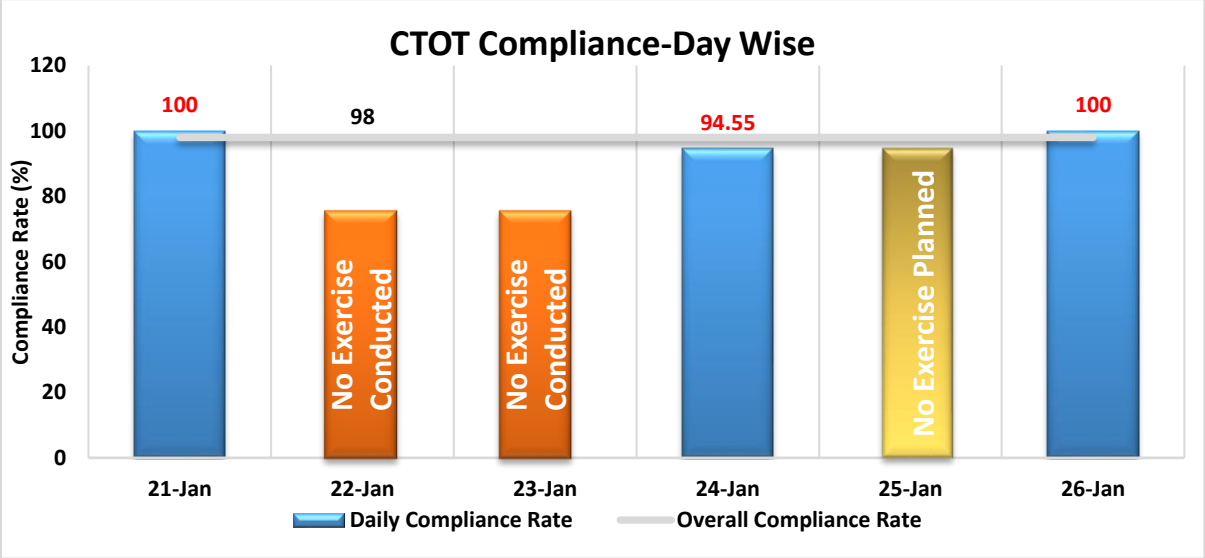
The data for the period during which ATFM measures were applied in Delhi on 21st, 24th & 26th January 2026 was analyzed for following ATFM parameters.

(*Flights with complete data i.e. ATOT, ALDT etc. are only taken into consideration. ATOT was obtained from all concerned airports for verifying CTOT compliance.)*

I. Average ATFM Ground Delay



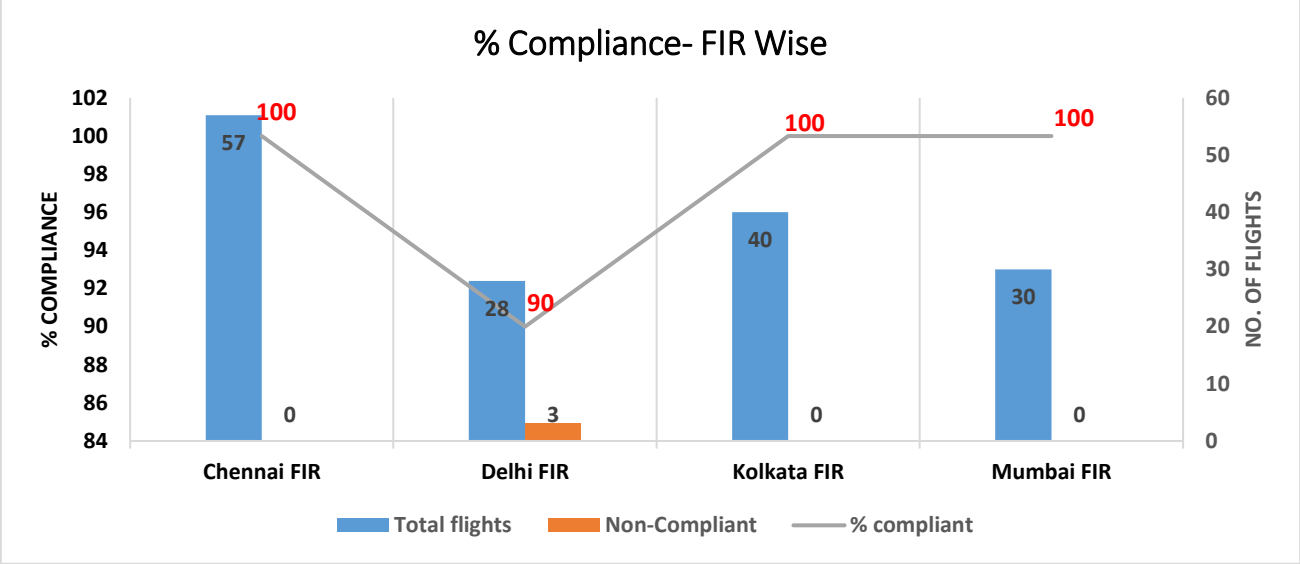
II. CTOT Compliance – Day wise:



Inference:

1. Some non compliances were observed on the days of Republic day exercise however, all the stations contributed for successful airspace closure on 26 January 2026 resulting in 100% compliance.

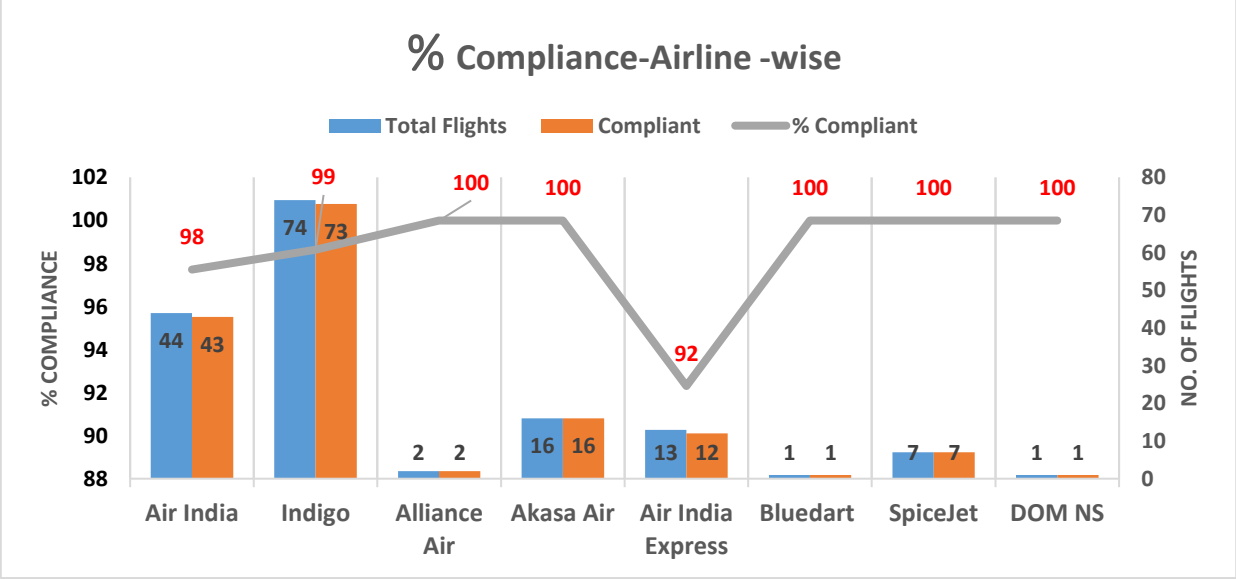
III. CTOT Compliance (FIR-wise)



Inference:

1. Chennai, Mumbai and Kolkata FIR has the Compliance of 100% whereas Delhi FIR has compliance of 90%.

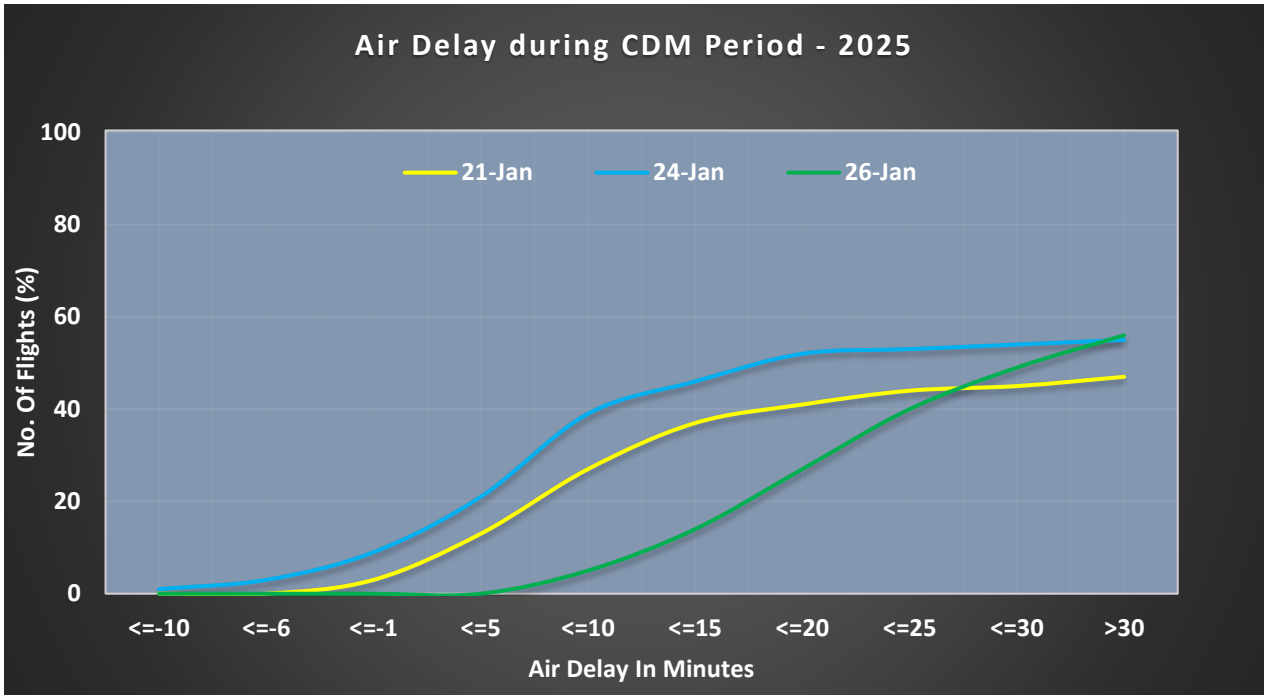
IV. CTOT Compliance (Airline-wise)



Inference

1.Allaince Air, Akasa, Bluedart and Spicejet has the highest compliance of 100% whereas Air India Express has the lowest compliance of 92% among scheduled operators. Non Scheduled operators have a compliance of 100%.

V. Cumulative Air Delay during the period when ATFM measures were inforce.



Inference:

1. 43% of arriving flights to Delhi had an Air delay of equal to or less than 10 minutes during the CDM period on 21 Jan'26.
2. 73% of arriving flights to Delhi had an Air delay of equal to or less than 10 minutes during the CDM period on 24 Jan'26.
3. 05% of arriving flights to Delhi had an Air delay of equal to or less than 10 minutes during the CDM period on 26 Jan'26.

F. Fuel Saving due to ATFM Measures during the Republic Day closure:

The Fuel consumed per minute(Kg/min) was calculated for each affected flight.

Total Air delay (with ATFM measures) = **2820 min**

Total Air delay (with no ATFM measures) = **5350 min**

Total amount of Air delay reduced due to ATFM measures= 5350-2820= **2530 min**

Fuel Saving Calculation:

Total Fuel saved during the ATFM Measure: ***1,51,232.44 Kg***

Total reduction in CO_2 emission : 3.16(KgCO_2/kg fuel)* 1,51,232.44 Kg 477894.51 **Kg**

3.16 = constant representing the number of tonnes of CO2 produced by burning a tonne of aviation fuel.

--END of REPORT--