

AIRPORTS AUTHORITY OF INDIA
(Directorate of Aviation Safety)

No. AAI/AVS/13-31/2022/ **73**

June 16, 2025

I.O.N.

Sub: Safety Performance Indicators(SPIs)/Safety Performance Targets(SPTs) Booklet

Directorate of Aviation Safety has prepared Annual Safety Performance Booklet for the Calendar Year 2024. This booklet consists of SPIs and their corresponding SPTs for the year 2025 and aims to provide valuable insights into the use of safety performance indicators as a powerful tool for measuring, monitoring and improving safety performance. By embracing safety performance indicators, AAI can enhance their safety management systems, identify trends and proactively address safety risks.

Six SPIs with their corresponding SPTs for Aerodrome Operations and Eight SPIs with their corresponding SPTs for ATS for the year 2025 have been selected for monitoring safety performance of AAI. Other than these safety indicators, certain new SPI's have been included in the National Aviation Safety Plan (2024-28) by the DGCA for which data has to be collected by the respective Directorates for the year 2025 onwards for inclusion in the next year issue of the booklet.

A copy of the booklet is forwarded for your kind reference. It is requested that all APDs and ATS/Ops/CNS In-charges may be suitably sensitized to achieve these SPTs.



[Anil Kumar Meena]
Executive Director (Aviation Safety)

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ANNUAL SMS PERFORMANCE OF AIRPORTS AUTHORITY OF INDIA 2024



Directorate of Aviation Safety, New Delhi
AIRPORTS AUTHORITY OF INDIA

Introduction

The Safety Performance Indicator (SPI) package of Airports Authority of India (AAI) for the year **2024** (1st January to 31st December) is drawn from two mainstream operational sectors of AAI. These safety-critical sectors are Aerodrome Operations and Air Traffic Management (ATM).

Safety critical elements from these sectors are identified and established as AAI's Safety Performance Indicators (SPI). These SPIs are congruent with State's National Aviation Safety Plan (2024-2028).

Safety Performance Targets (SPTs) of corresponding Safety Performance Indicator (SPIs), of which historical data is available is set. Safety Performance Targets (SPTs) are based on the percentage of improvement over last year's safety performance (average), as agreed upon by respective directorates. Three Alert levels are also established based on the preceding period's (i.e. **2024**) performance, namely average and standard deviation (SD). Three Alert lines are average + 1SD / 2SD / 3SD. An alert trigger (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for the current monitoring period (**2025**):

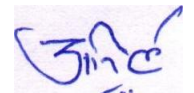
- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert level 1 line**

Source of Data

The Annual SMS performance booklet for 2024 has been prepared on the traffic and incident data received from Airport Operations and Air navigation Services. The traffic data includes total number of arrivals, departures and over flights. An over flight means an aircraft entering into Indian air space, over flying in air space and exiting Indian air space.

Annual SMS performance summary

Annual SMS performance summary shall be compiled at the end of each monitoring period i.e. by 31st December of every year. Summary will be based on respective Target & Alert level outcomes annotated. At the end of current year 2025, if the average rate for the current year is at least equal to or lower than the set Target, then the set Target of improvement is deemed to have been achieved.



(A.K MEENA)

Executive Director (Aviation Safety)

AAI SMS Performance Summary – 2024

SPI Description	Target Achieved in 2023 [Yes/No]	SPI Target Level Criteria (for 2024)	Alert Level breached in 2024 [Yes/ No]	Target Achieved in 2024 [Yes/No]	SPI Level Criteria (for 2025)	Alert (for 2025)	SPI Target Level Criteria (for 2025)
Aerodrome Operations							
(1) Number of 'near' runway excursions per 10,000 approaches.	Yes	0.018	No	Yes	AL1 = 0.07 AL2 = 0.12 AL3 = 0.17		0.017
(2) Number of runway excursions per 10,000 approaches	Yes	0.045	No	Yes	AL1 = 0.07 AL2 = 0.12 AL3 = 0.17		0.044
(3) Number of reported birds strikes at all AAI administered airports per 10,000 movements	No	4.93*	Yes	No	AL1 = 6.66 AL2 = 8.26 AL3 = 9.86		4.93*
(4) Number of reported wildlife (Birds + Animal) strikes at all AAI administered Airports per 10,000 movements.	No	6.73*	No	No	AL1 = 8.57 AL2 =10.41 AL3 =12.25		6.73*
(5) Number of runway incursions by animal at all AAI administered Airports per 10,000 movements	No	0.019*	Yes	No	AL1 = 0.07 AL2 = 0.12 AL3 = 0.17		0.019*
(6) Number of ramp incidents that result in damage to aircraft, vehicles or loss of life/ serious injury to personnel per 10,00,000 movements	Yes	4.83	Yes	Yes	AL1 = 7.46 AL2 = 12.21 AL3 = 16.96		4.68

Air Traffic Services (ATS)						
SPI Description	Target Achieved in 2023 [Yes/No]	SPI Target Level Criteria (for 2024)	Alert Level breached in 2024 [Yes/ No]	Target Achieved in 2024 [Yes/No]	SPI Alert Level Criteria (for 2025)	SPI Target Level Criteria (for 2025)
(7) Number of risk-bearing AIRPROX per 10,00,000 flights over Indian airspace	Yes	2.15*	Yes	No	AL1 = 4.06 AL2 = 7.18 AL3 = 10.3	2.15*
(8) Number of aircraft not or incorrectly complying with ATC instructions (including level bust) per 10,00,000 flights over Indian airspace	No	3.05*	No	No	AL1 =39.56 AL2 =51.77 AL3 = 63.98	3.05*
(9) Number of AIRPROX attributable to ATC/System failure per 10,00,000 flights over Indian airspace	No	9.74	No	Yes	AL1 =10.19 AL2 =13.88 AL3= 17.57	9.45
(10) Communication Errors per 10,00,000 Movements.	Yes	15.00	Yes	Yes	AL1 = 8.05 AL2 = 12.56 AL3 = 17.07	14.55
(11) Number of Laser interferences per 10,000 movements	No	0.0069*	Yes	No	AL1= 0.03 AL2= 0.05 AL3= 0.07	0.0069*
(12) Number of runway incursions (aircraft) per 10,00,000 movements	No	10.55*	Yes	No	AL1 =11.89 AL2 =14.23 AL3 =16.57	10.55*
(13) Number of runway incursions (vehicle) per 10,00,000 movements	No	1.33*	Yes	No	AL1 = 7.12 AL2 =11.63 AL3 =16.14	1.33*
(14) Number of runway incursions (person) per 10,00,000 movements	Yes	1.47	Yes	Yes	AL1 = 4.79 AL2 = 8.26 AL3 =11.73	1.43

* As the target set for 2024 was not achieved, hence it has been decided that the target and alert levels for 2025 shall be same as for 2024.

SAFETY PERFORMANCE INDICATORS (SPIs) FOR AERODROME OPERATIONS (OPS)



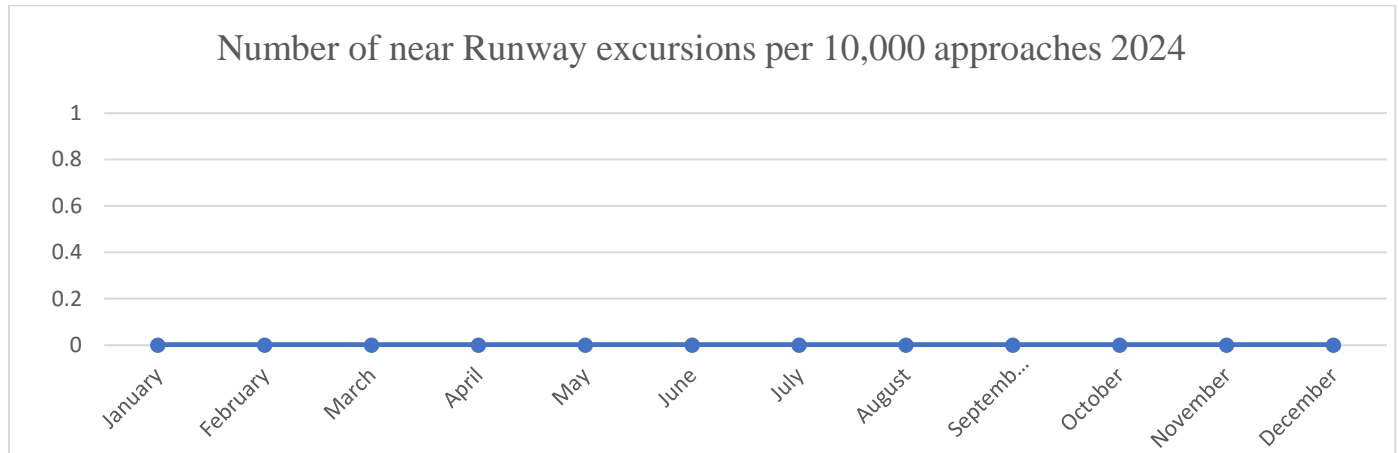
Number of 'near' runway excursions per 10,000 approaches

1.1 Definition

'Near' Runway Excursion is an occurrence where aircraft is not able to maintain the directional ability on the runway which may result in damage to the runway edge/end lights. However, aircraft continues to remain on the paved surface.

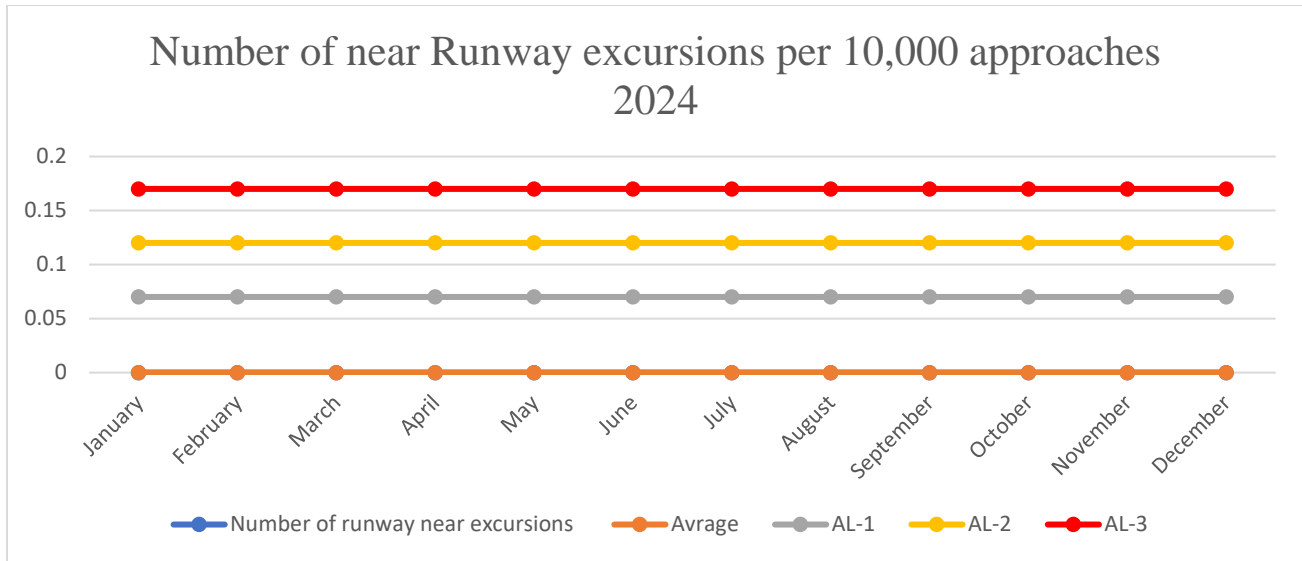
1.2 Data Analysis:

Number of 'Near' Runway Excursion per 10,000 approaches during year **2024** and detailed analysis is appended below



Month	Aircraft approaches	Number of 'near' runway excursions	Value of SPI per 10000 movements (X)	Average (U)	X-U	(X-U) ²	AL-1	AL-2	AL-3
January	43150	0	0.00	0	0	0	0.07	0.12	0.17
February	42637	0	0.00	0	0	0	0.07	0.12	0.17
March	46854	0	0.00	0	0	0	0.07	0.12	0.17
April	46240	0	0.00	0	0	0	0.07	0.12	0.17
May	47626	0	0.00	0	0	0	0.07	0.12	0.17
June	45149	0	0.00	0	0	0	0.07	0.12	0.17
July	45277	0	0.00	0	0	0	0.07	0.12	0.17
August	46312	0	0.00	0	0	0	0.07	0.12	0.17
September	45859	0	0.00	0	0	0	0.07	0.12	0.17
October	48289	0	0.00	0	0	0	0.07	0.12	0.17
November	47362	0	0.00	0	0	0	0.07	0.12	0.17
December	49208	0	0.00	0	0	0	0.07	0.12	0.17
Total	553963	0	0.00			0.00			

Standard Deviation =0.00



1.3 Safety Performance Target (SPT):

Average = 0	Target for 2024 = 0.018 Achieved	Target for 2025 = 0.017 (reduction of 3%)
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The Average performance for the year 2024 has been 0 and none of the Alert level is breached. As the target of **0.018** for year **2024** has been achieved hence it has been decided that the target for year **2025** shall be **0.017** (i.e. reduction of 3%).

1.4 Alert Level:

a) Alert level setting

Alert Levels for the year 2025 ¹		
Alert Level -1	Alert Levels for 2025 are same as for 2022	0.07
Alert Level -2		0.12
Alert Level -3		0.17

b) Alert Level Trigger

An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for the current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

¹ Any year when data for an SPI is nil and alert levels comes out to be 0 for the succeeding year, the alert levels are then taken from the preceding years, when these were non-zero. Here alert levels for year 2022 have been considered.

When an Alert is triggered (potential high risk or out-of-control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

1.5 Target Achievement at the end of the monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.

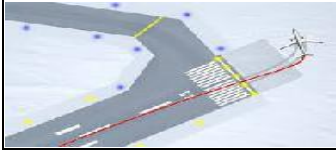
1.6 Safety Action Plan

Safety Measures Already in Place

Operations Directorate references	Safety Measures already in place
DGCA Aerodrome Advisory Circular 01 of 2019	Assessment and Measurement of Runway Surface Friction Characteristics at Aerodromes.
DGCA Aerodrome Advisory Circular 01 of 2021	Runway Surface Condition Reporting format using Standard Runway Condition Report
Operational Circular 05 of 2011	Procedure of inspection runways,
Operational Circular 05 of 2019	Pre-monsoon checks in Ops area at airports
Operational Circular 09 of 2019	Maintenance of Airside Facilities at airports.
Operational Circular 05 of 2021	Frangible object (AGL) are installed
Operational Circular 01 of 2022	Guidance on Maintenance of Visual Aids at Aerodrome
DGCA Aerodrome Advisory Circular 02 of 2022	Guidance on Maintenance of Visual Aids at Aerodrome

Safety Action Plan

Safety Objective(s)	Action
Reduce the number of Near Runway Excursions.	Standard RWY markings and lights with proper maintenance schedule. Maintenance and corrective action for RWY Rubber Removal. Ensure proper slope on runway.



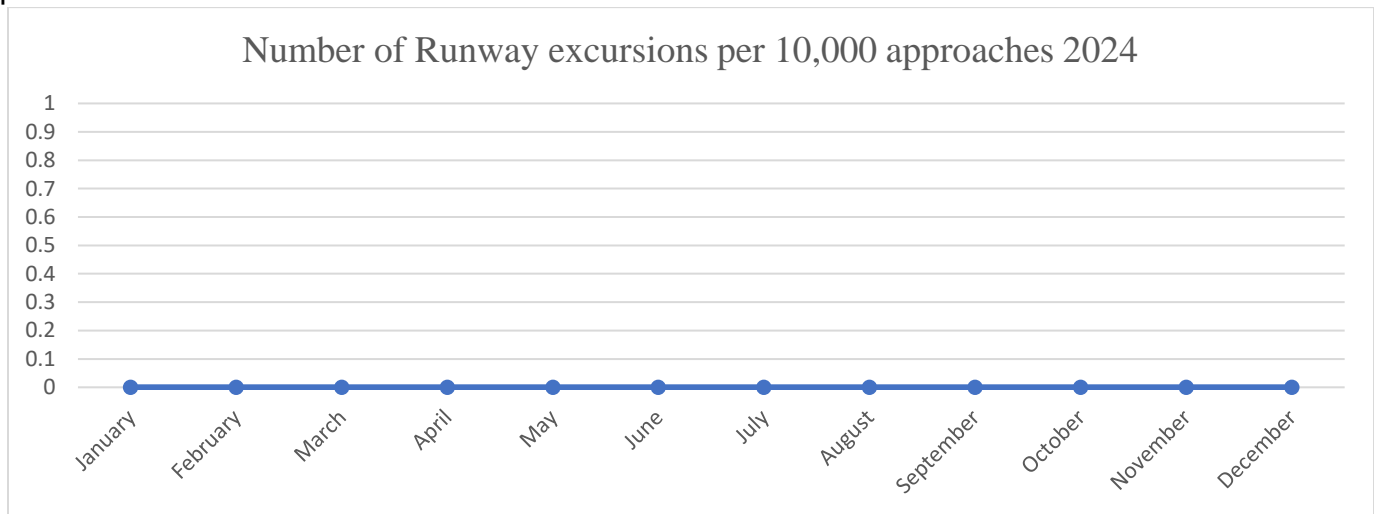
Number of Runway excursions per 10,000 approaches.

2.1 Definition

A runway excursion is a **veer-off or overrun from the runway surface** (ICAO). These surface events occur while an aircraft is taking off or landing, and involve many factors ranging from unstable approaches to the condition of the runway

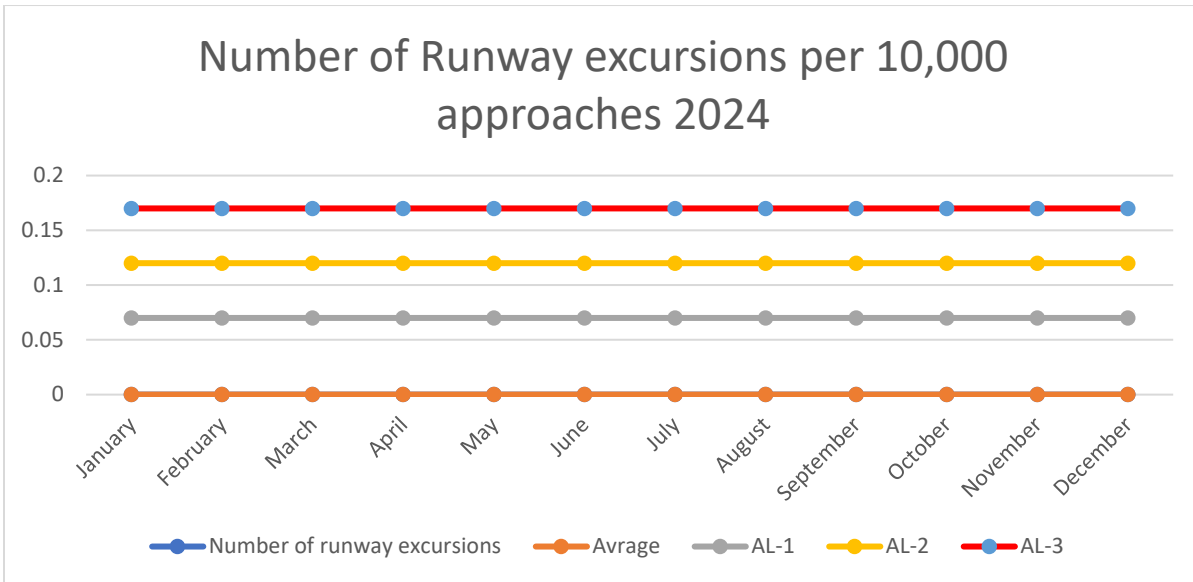
2.2 Data Analysis:

Number of Runway excursions per 10,000 approaches during the year. **2024** and detailed analysis is appended below



Month	Aircraft approaches	Number of runway excursions	Value of SPI per 10,000 movements (X)	Average (U)	X-U	(X-U)^2	AL-1	AL-2	AL-3
January	43150	0	0.00	0	0	0	0.07	0.12	0.17
February	42637	0	0.00	0	0	0	0.07	0.12	0.17
March	46854	0	0.00	0	0	0	0.07	0.12	0.17
April	46240	0	0.00	0	0	0	0.07	0.12	0.17
May	47626	0	0.00	0	0	0	0.07	0.12	0.17
June	45149	0	0.00	0	0	0	0.07	0.12	0.17
July	45277	0	0.00	0	0	0	0.07	0.12	0.17
August	46312	0	0.00	0	0	0	0.07	0.12	0.17
September	45859	0	0.00	0	0	0	0.07	0.12	0.17
October	48289	0	0.00	0	0	0	0.07	0.12	0.17
November	47362	0	0.00	0	0	0	0.07	0.12	0.17
December	49208	0	0.00	0	0	0	0.07	0.12	0.17
Total	553963	0	0.00			0.00			

Standard Deviation =0.00



2.3 Safety Performance Target (SPT):

Average = 0.00	Target for 2024=0.045 Achieved	Target for 2025= 0.044 (reduction of 3%)
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The Average performance for the year 2024 has been 0.00 and Alert level has not been breached. As the target of **0.045** for year **2024** has been achieved hence it has been decided that the target for **2025** shall be 0.044 (i.e. reduction of 3%)

2.4 Alert Level:

a) Alert level setting

Alert level for **2025** is as below -

Alert Levels for the year 2025 ²		
Alert Level -1	Alert Levels for 2025 are same as for 2023	0.07
Alert Level -2		0.12
Alert Level -3		0.17

b) Alert Level Trigger

An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for the current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

² Any year when data for an SPI is nil and alert levels comes out to be 0 for the succeeding year, the alert levels are then taken from the preceding years, when these were non-zero. Here alert levels for year 2023 have been considered.

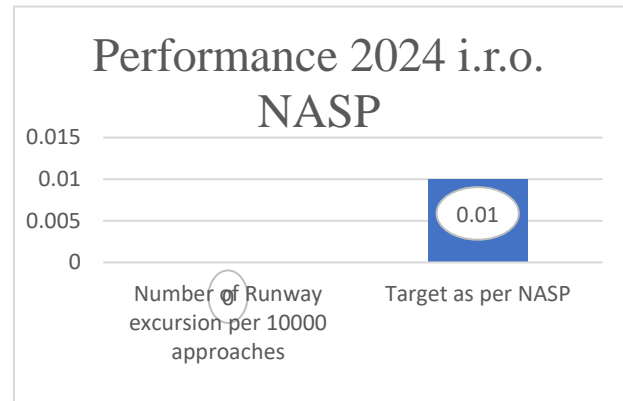
When an Alert is triggered (potential high risk or out-of-control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

2.5 Target Achievement at the end of the monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.

2.6 Comparison with National Aviation Safety Plan-

The average number of Runway excursions per 10,000 approaches are less than the target set in NASP.



2.7 Safety Action Plan

Safety Measures Already in Place

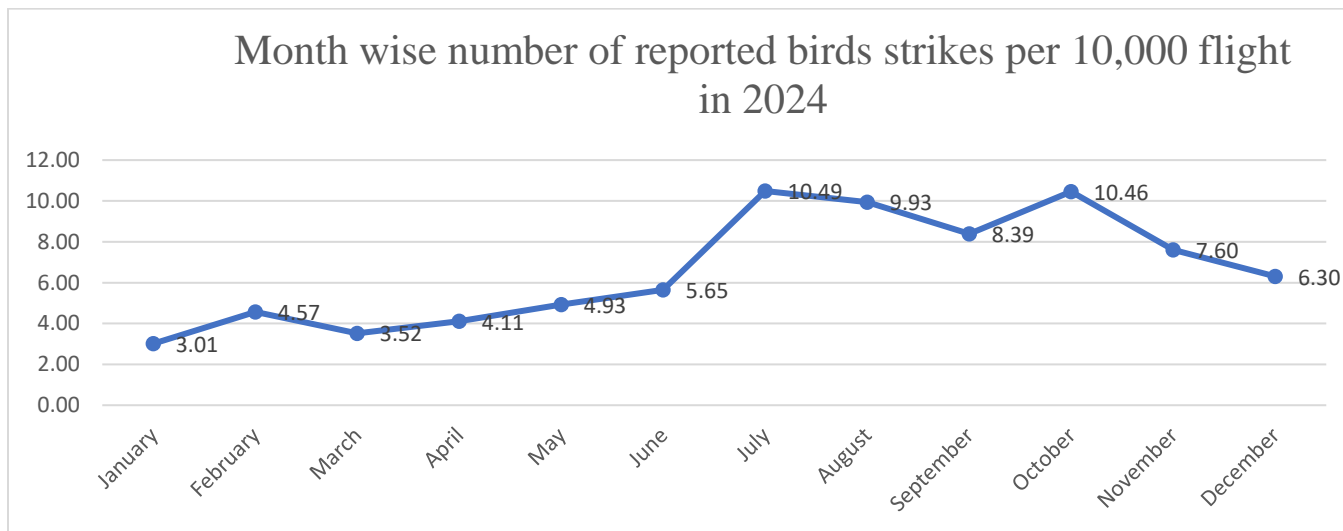
Operations Directoratereferences	Safety Measures already in place
DGCA AerodromeAdvisory Circular 01 of 2019	Assessment and Measurement of Runway SurfaceFriction Characteristics at Aerodromes.
DGCA Aerodrome Advisory Circular 01 of 2021	Runway Surface Condition Reporting format usingStandard Runway Condition Report
Operational Circular 05 of2011	Procedure of inspection runways,
Operational Circular 05 of2019	Pre-monsoon checks in Ops area at airports
Operational Circular 09 of2019	Maintenance of Airside Facilities at airports.
Operational Circular 05 of2021	Frangible object (AGL) are installed
Operational Circular 01 of 2022	Guidance on Maintenance of Visual Aids at Aerodrome
DGCA Aerodrome Advisory Circular 02 of 2022	Guidance on Maintenance of Visual Aids at Aerodrome



Number of reported birds strikes at all AAI administered Airports per 10,000 movements

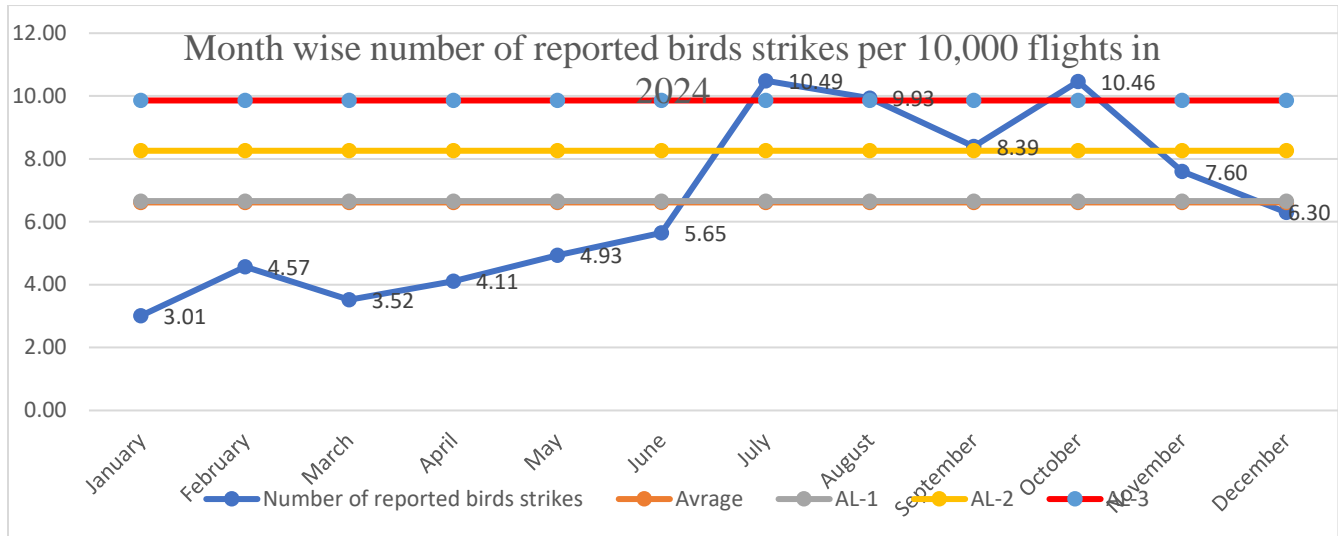
3.1 Definition

A bird strike is a collision between a bird and an aircraft which is in flight or on a take-off or landing roll. Approaches during last year i.e. **2024** and detailed analysis is appended below



3.2 Data Analysis:

Month	Total Aircraft Movements (Arrival + Departure)	Number of reported bird strikes	Value of SPI per 10000 movements (X)	Average (U)	X-U	(X-U)^2	AL-1	AL-2	AL-3
January	86282	26	3.01	6.62	-3.60	12.98	6.66	8.26	9.86
February	85281	39	4.57	6.62	-2.04	4.17	6.66	8.26	9.86
March	93692	33	3.52	6.62	-3.09	9.57	6.66	8.26	9.86
April	92487	38	4.11	6.62	-2.51	6.29	6.66	8.26	9.86
May	95265	47	4.93	6.62	-1.68	2.83	6.66	8.26	9.86
June	90251	51	5.65	6.62	-0.97	0.93	6.66	8.26	9.86
July	90587	95	10.49	6.62	3.87	14.98	6.66	8.26	9.86
August	92606	92	9.93	6.62	3.32	11.01	6.66	8.26	9.86
September	91750	77	8.39	6.62	1.78	3.15	6.66	8.26	9.86
October	96536	101	10.46	6.62	3.85	14.79	6.66	8.26	9.86
November	94725	72	7.60	6.62	0.98	0.97	6.66	8.26	9.86
December	98397	62	6.30	6.62	-0.32	0.10	6.66	8.26	9.86
Total	1107859	733	6.62	6.62		81.79			
Standard Deviation =2.61									



3.3 Safety Performance Target (SPT):

Average = 6.62	Target for 2024=4.93 Not Achieved	Target for 2025= 4.93
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The Average performance for the year 2024 has been 6.62 and Alert level-3 has been breached twice in the month of July and October. As the target of **4.93 for year 2024** has not been achieved, hence it has been decided that the target for **2025** shall be same as **4.93**.

3.4 Alert Level:

a) Alert level setting

Alert Levels for the year 2025		
Alert Level -1	Alert Levels for 2025 are same as for 2024	6.66
Alert Level -2		8.26
Alert Level -3		9.86

b) Alert Level Trigger

An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for the current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

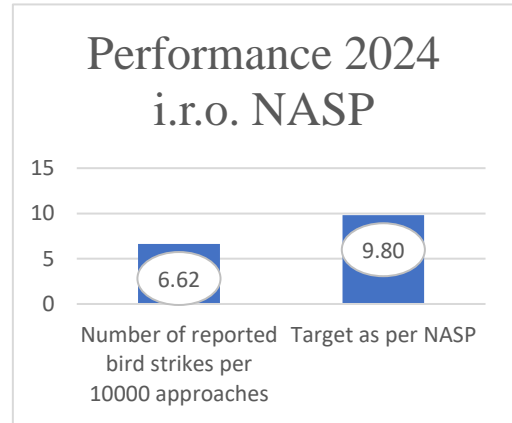
When an Alert is triggered (potential high-risk or out-of-control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

3.5 Target Achievement at the end of the monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.

3.6 Comparison with National Aviation Safety Plan-

The average number of reported birds strikes at all AAI administered Airports per 10,000 movements are less than the target set in NASP.



3.7 Safety Action Plan

Safety Measures already in place	
Operational circular 2 of 2014 dated 24th December 2014	Constitution of Airfield Environment Management Committees to check bird strike hazard near the airfields
Operational circular 2 of 2014 dated 3rd February 2015	Primary legislation (Aircraft Rules) preventing dumping of garbage and de-skinning of animals within a 10 km radius around airport
Rule 91, Aircraft Rules 1937	National Bird Control Committee
DGCA Order No.AV-15023/1/2009-AS(NBCC) dated 02.12.2013	Education and outreach programs
Recommendation of NBCC (National Bird Control committee)	Extensive audits and inspections
Recommendation of NBCC (National Bird Control committee)	Wildlife Hazard Management
DGCA Aerodrome Advisory Circular 01 of 2022	Management of Potential Wildlife Hazards at Licensed Aerodromes.
Operational circular 02 of 2023	Wildlife Hazard Management

Safety Action Plan

Safety Objective(s)	Action
Reduce the number of bird strikes	<ol style="list-style-type: none"> 1. Discuss with local administration of the State Govt. in AEMC meeting on the issues related to reduce Birdstrike within vicinity of airport and ensure establishment of Garbage & Slaughter house beyond 10 Km from ARP. 2. Deployment of mechanized Bird/ Animal scaring equipment 3. Grading & Levelling of runway strip

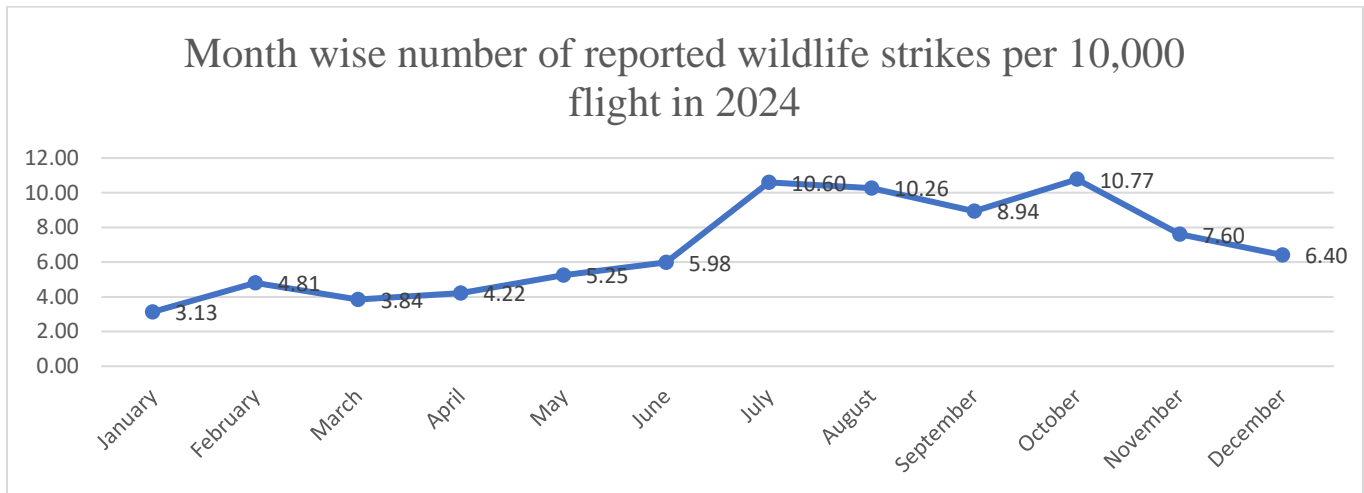


Number of reported wildlife strikes (Bird hit and Animal) at all AAI administered Airports per 10,000 movements

4.1 Definition

A wildlife strike is a collision between wildlife and an aircraft that is on a take-off or landing roll.

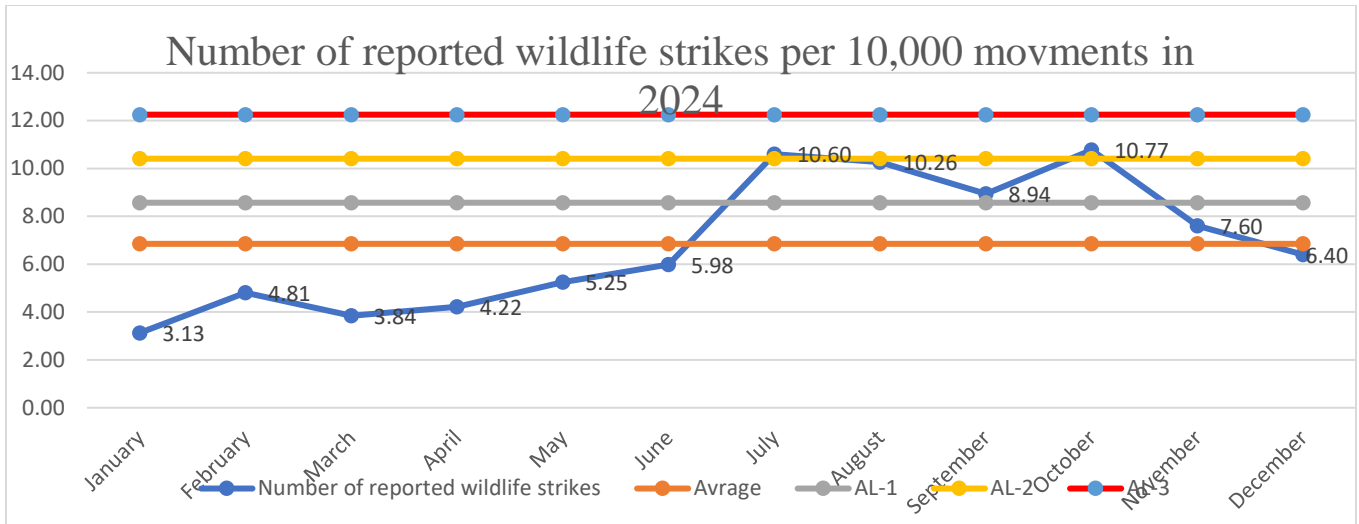
Number of reported wildlife strikes at all AAI administered Airports per 10,000 movements during year **2023** and detailed analysis is appended below



4.2 Data Analysis:

Month	Total Aircraft Movements (Arrival + Departure)	Number of reported wildlife strikes	Value of SPI per 10000 movements (X)	Average (U)	X-U	(X-U)^2	AL-1	AL-2	AL-3
January	86282	27	3.13	6.85	-3.72	13.84	8.57	10.41	12.25
February	85281	41	4.81	6.85	-2.04	4.17	8.57	10.41	12.25
March	93692	36	3.84	6.85	-3.01	9.05	8.57	10.41	12.25
April	92487	39	4.22	6.85	-2.63	6.93	8.57	10.41	12.25
May	95265	50	5.25	6.85	-1.60	2.56	8.57	10.41	12.25
June	90251	54	5.98	6.85	-0.87	0.75	8.57	10.41	12.25
July	90587	96	10.60	6.85	3.75	14.04	8.57	10.41	12.25
August	92606	95	10.26	6.85	3.41	11.62	8.57	10.41	12.25
September	91750	82	8.94	6.85	2.09	4.36	8.57	10.41	12.25
October	96536	104	10.77	6.85	3.92	15.39	8.57	10.41	12.25
November	94725	72	7.60	6.85	0.75	0.56	8.57	10.41	12.25
December	98397	63	6.40	6.85	-0.45	0.20	8.57	10.41	12.25
Total	1107859	759	6.85			83.48			

Standard Deviation =2.64



4.3 Safety Performance Target (SPT):

Average = 6.85	Target for 2024=6.73 Not Achieved	Target for 2025= 6.73
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The Average performance for the year 2024 has been 6.85 and Alert level -2 has been breached twice in the month of July and October. As the target of **6.73** for year **2024** has not been achieved hence it has been decided that the target for **2025** shall be same as **6.73**.

4.4 Alert Level:

a) Alert level setting

Alert Levels for the year 2025 ³		
Alert Level - 1	Alert Levels for the year 2025 are same as for year 2024	8.57
Alert Level - 2		10.41
Alert Level - 3		12.25

b) Alert Level Trigger- An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for the current monitoring period (2025):

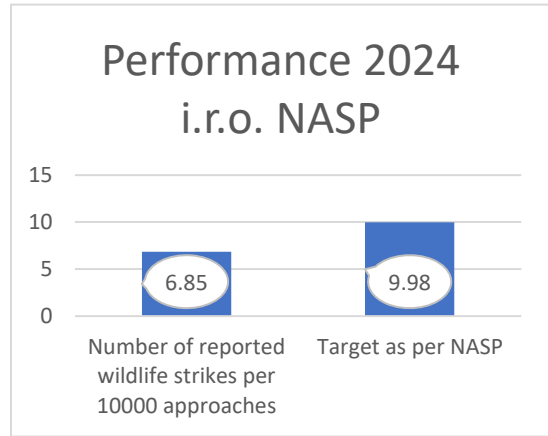
- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

When an Alert is triggered (potential high risk or out-of-control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

³ The data base line has been revised in the year 2024 by combining bird hits and animal strike making a departure from the previous years' data calculation wherein only animal strike was considered. Alert level for the year 2025 has been kept same as of 2023

4.5 Target Achievement at the end of the monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.



4.6 Comparison with National Aviation Safety Plan

The average number of reported wildlife strikes at all AAI administered Airports per 10,000 movements are less than the target set in NASP.

4.7 Safety Action Plan

Safety Measures already in place

Operational circular 2 of 2014 dated 24th December 2014	Constitution of Airfield Environment Management Committees
Operational circular 2 of 2014 dated 3rd February 2015	Perimeter wall / Fencing check
Rule 91, Aircraft Rules 1937	Primary legislation (Aircraft Rules) preventing dumping of garbage and de-skinning of animals within a 10 km radius around airport
DGCA Order No. AV- 15023/1/ 2009-AS (NBCC) dated 02.12.2013	Wildlife Hazard Management
Recommendation of NBCC (National Bird Control committee)	Education and outreach programs
DGCA Aerodrome Advisory Circular 01 of 2022	Management of Potential Wildlife Hazards at Licensed Aerodromes.
Operational circular 02 of 2023	Wildlife Hazard Management

Safety Action Plan

Safety Objective(s)	Action
Reduce the number of wildlife strikes (ground)	<ul style="list-style-type: none"> . Deployment of mechanized Bird/ Animal scaring equipment . Placement of cages to trap the wild life and agreement with State Forest Department for removal of same. . Grading & levelling of runway strip.



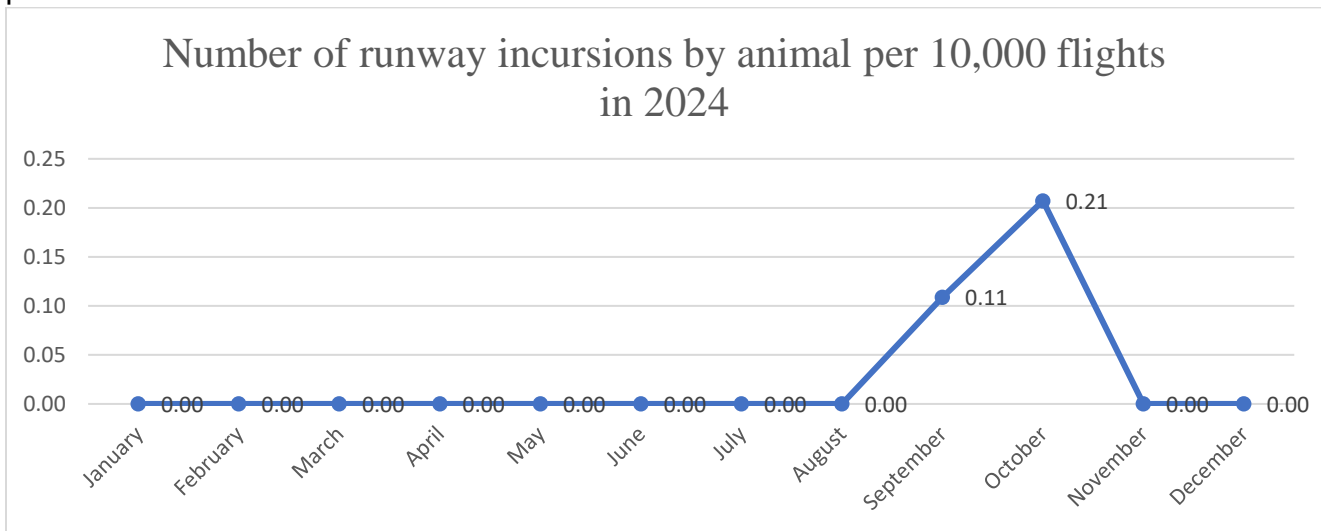
Number of runway incursions by animal at all AAI administered Airports per 10,000 movements

5.1.Scope:

Runway Incursion by animal means any occurrence at an aerodrome involving the incorrect presence of animal on the protected area of a surface designated for the landing and take-off of aircraft.

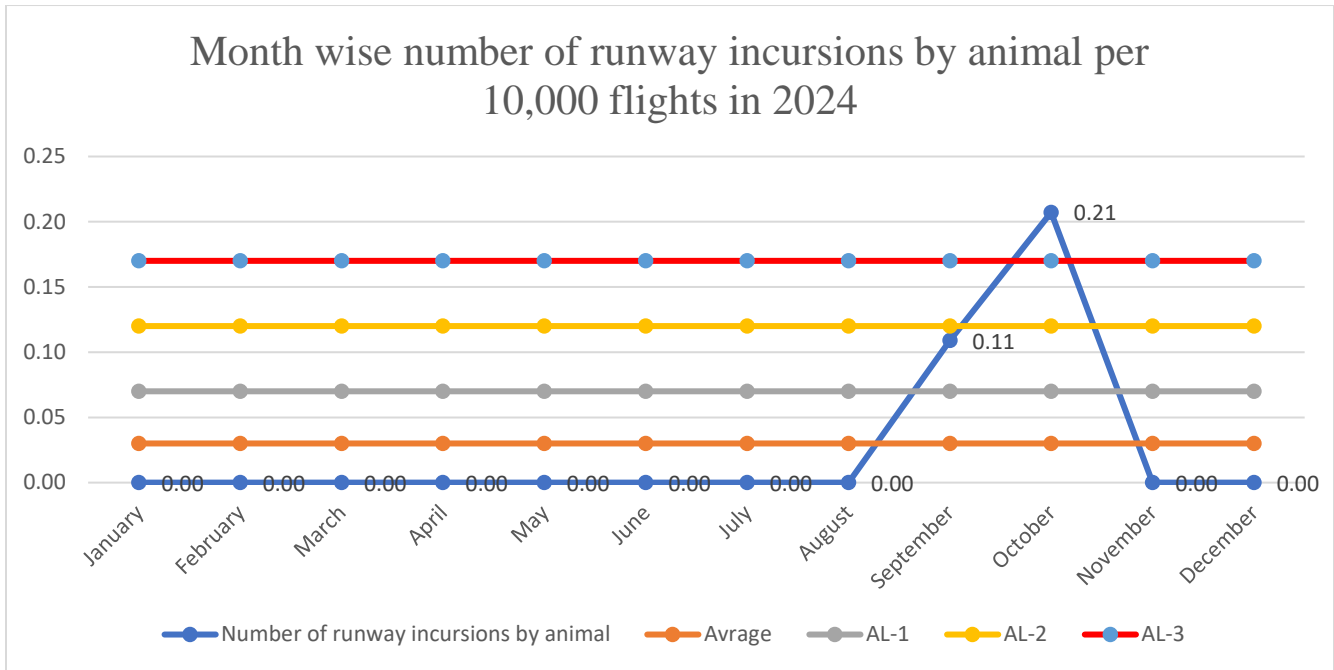
5.2 Analysis of Data:

Number of runway incursions by animal per 10,000 movements during year **2024** and detailed analysis is appended below



Month	Total Aircraft Movements (Arrival + Departure)	Number of runway incursions by animal	Value of SPI per 10000 movements (X)	Average (U)	X-U	(X-U)^2	AL-1	AL-2	AL-3
January	86282	0	0.00	0.03	-0.03	0.00	0.07	0.12	0.17
February	85281	0	0.00	0.03	-0.03	0.00	0.07	0.12	0.17
March	93692	0	0.00	0.03	-0.03	0.00	0.07	0.12	0.17
April	92487	0	0.00	0.03	-0.03	0.00	0.07	0.12	0.17
May	95265	0	0.00	0.03	-0.03	0.00	0.07	0.12	0.17
June	90251	0	0.00	0.03	-0.03	0.00	0.07	0.12	0.17
July	90587	0	0.00	0.03	-0.03	0.00	0.07	0.12	0.17
August	92606	0	0.00	0.03	-0.03	0.00	0.07	0.12	0.17
September	91750	1	0.11	0.03	0.08	0.01	0.07	0.12	0.17
October	96536	2	0.21	0.03	0.18	0.03	0.07	0.12	0.17
November	94725	0	0.00	0.03	-0.03	0.00	0.07	0.12	0.17
December	98397	0	0.00	0.03	-0.03	0.00	0.07	0.12	0.17
Total	1107859	3	0.03			0.05			

Standard Deviation =0.06



5.3 Safety Performance Target (SPT):

Average = 0.03	Target for 2024=0.019 Not Achieved	Target for 2025= 0.019
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The Average performance for the year 2024 has been 0.03 and Alert level-3 has been breached once in the month of October.

As the target of **0.019** for year **2024** has not been achieved hence it has been decided that the target for year **2025** shall be kept as **0.019**.

5.4 Alert Level:

a) Alert level setting

Alert Levels for the year 2025		
Alert Level -1	Alert Levels for the year 2025 are same as for year 2024	0.07
Alert Level -2		0.12
Alert Level -3		0.17

b) Alert Level Trigger

An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for the current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

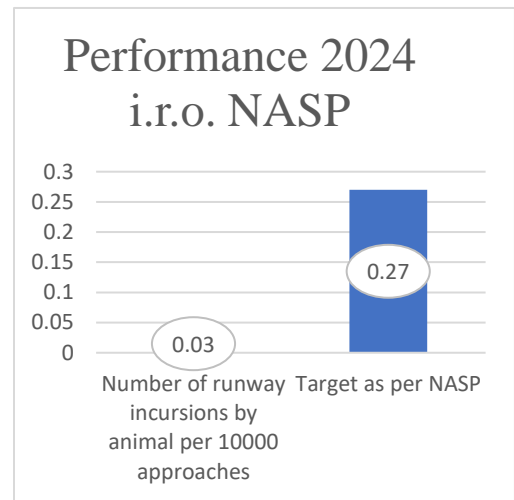
When an Alert is triggered (potential high risk or out-of-control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

5.5 Target Achievement at the end of the monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.

5.6 Comparison with National Aviation Safety Plan-

The average number of runway incursions by animal at all AAI administered Airports per 10,000 movements are less than the target set in NASP.



5.7 Safety Action Plan

Safety Measures already in place	
Operational circular 02 of 2014 dated 3rd February 2015	Perimeter wall / Fencing check
Rule 91, Aircraft Rules 1937	Primary legislation (Aircraft Rules) preventing dumping of garbage and de-skinning of animals within a 10 km radius around airport
DGCA Aerodrome Advisory Circular 06 of 2017	Wildlife Hazard Management
DGCA Aerodrome Advisory Circular 01 of 2022	Management of Potential Wildlife Hazards at Licensed Aerodromes.
Operational circular 02 of 2023	Wildlife Hazard Management

Safety Action Plan

Safety Objective(s)	Action
Reduce the number of Runway incursions by wildlife.	<ol style="list-style-type: none"> 1. Implementation of suitable plan for collection and disposal of Garbage from airside. 2. Proper Fencing and perimeter wall all around the airport. 3. Placement of cages to trap the wild life and agreement with State Forest Department for removal of same.



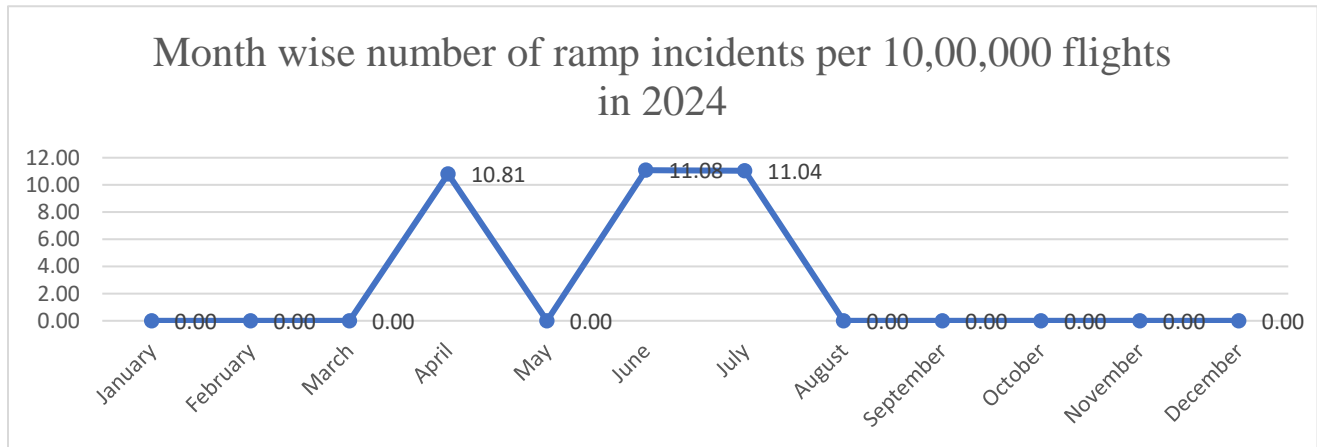
Number of ramp incidents that result in damage to aircraft, vehicles or loss of life/ serious injury to personnel per 10,00,000 movements

6.1 Definition

Ramp events are those that occur during, or as a result of, ground handling operations. Examples include loading, pushback, refuelling, etc. The most common types of ramp accidents and serious incidents involve collisions with other aircraft, ground objects, and with vehicle/equipment operations.

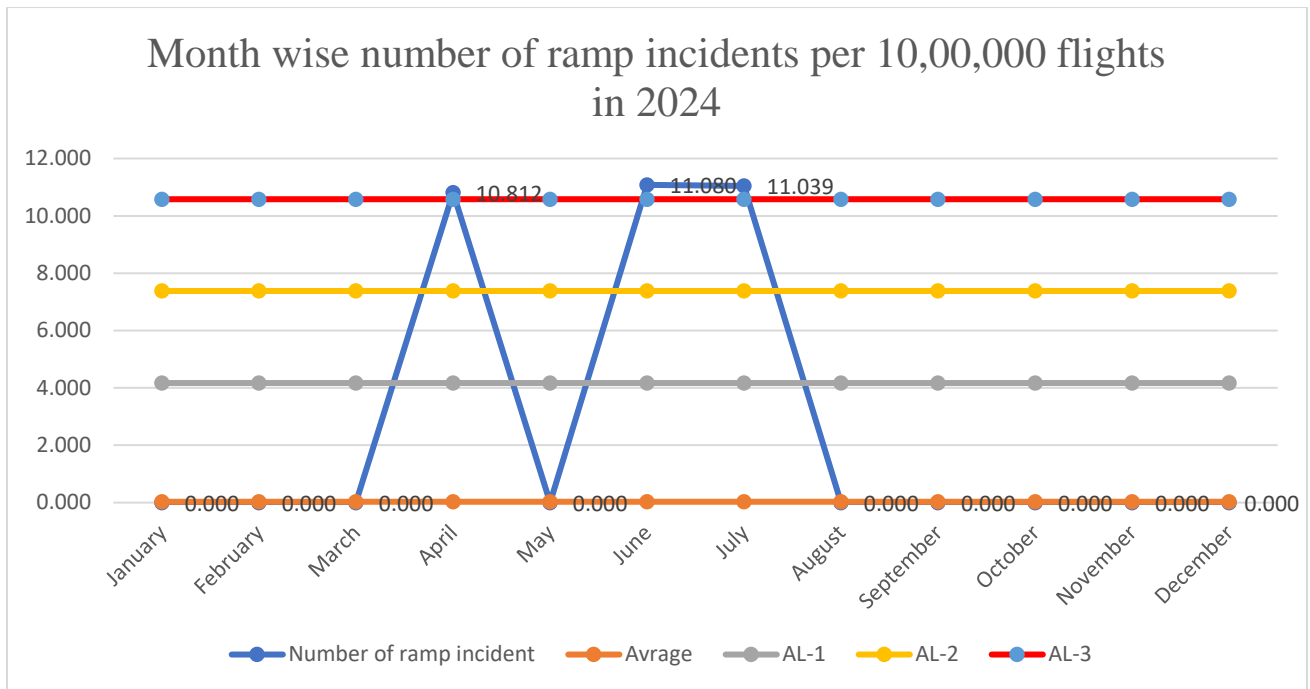
6.2 Analysis of Data:

Number of ramp incidents that result in damage to aircraft, vehicles or loss of life/ serious injury to personnel per 10,00,000 movements during last year i.e. **2024** and detailed analysis is appended below



Month	Total Aircraft Movements (Arrival + Departure)	Number of ramp incidents that result in damage to aircraft, vehicles, or loss of life/ serious injury to personnel	Value of SPI per 10,00,000 movements (X)	Average (U)	X-U	(X-U)^2	AL-1	AL-2	AL-3
January	86282	0	0.00	2.71	-2.71	7.33	4.17	7.38	10.58
February	85281	0	0.00	2.71	-2.71	7.33	4.17	7.38	10.58
March	93692	0	0.00	2.71	-2.71	7.33	4.17	7.38	10.58
April	92487	1	10.81	2.71	8.10	65.68	4.17	7.38	10.58
May	95265	0	0.00	2.71	-2.71	7.33	4.17	7.38	10.58
June	90251	1	11.08	2.71	8.37	70.10	4.17	7.38	10.58
July	90587	1	11.04	2.71	8.33	69.41	4.17	7.38	10.58
August	92606	0	0.00	2.71	-2.71	7.33	4.17	7.38	10.58
September	91750	0	0.00	2.71	-2.71	7.33	4.17	7.38	10.58
October	96536	0	0.00	2.71	-2.71	7.33	4.17	7.38	10.58
November	94725	0	0.00	2.71	-2.71	7.33	4.17	7.38	10.58
December	98397	0	0.00	2.71	-2.71	7.33	4.17	7.38	10.58
Total	1107859	3	2.71			271.18			

Standard Deviation =4.75



6.3 Safety Performance Target (SPT):

Average = 2.71	Target for 2024= 4.83 Achieved	Target for 2025= 4.68 (reduction of 3%)
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The Average performance for the year 2024 has been 2.71 and Alert level AL-3 has been breached thrice.

As the target of **4.83** for **2024** has been achieved, (Average is less than the set target of previous year) it has been decided that the target for year 2025 shall be decrease 3% as **4.68**.

6.4 Alert Level:

a) Alert level setting

Alert Levels for the year 2025			
Alert Level -1	AVG + 1 SD	$2.71 + 4.75 =$	7.46
Alert Level -2	AVG + 2 SD	$2.71 + 2(4.75) =$	12.21
Alert Level -3	AVG + 3 SD	$2.71 + 3(4.75) =$	16.96

b) Alert Level Trigger

An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for the current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

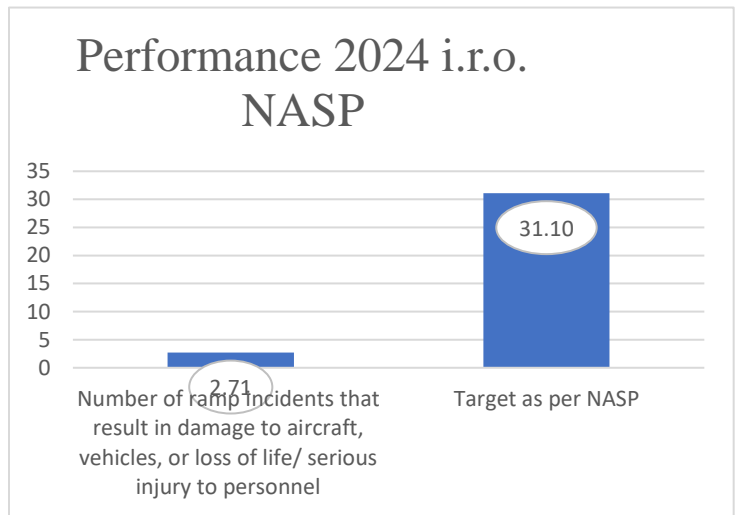
When an Alert is triggered (potential high risk or out-of-control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

6.5 Target Achievement at the end of the monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.

6.6 Comparison with National Aviation Safety Plan

The average number of ramp incidents that result in damage to aircraft, vehicles or loss of life/ serious injury to personnel per 10,00, 000 movements are less than the target set in NASP.



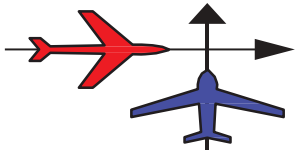
6.7 Safety Action Plan

Safety Measures already in place	
Operational circular 3 of 2015	Training of airfield personnel in Apron Safety Regulations. Issue of "Airfield Driving Permit" and control on Vehicles permit.
Operational circular 3 of 2022	Removal of Unserviceable/ Junk equipment from airport premises.
Operational Circular 05 of 2020	Penalty on violators not following apron rules

Safety Action Plan

Safety Objective(s)	Action
To minimize the No. of RAMP incidents	<ol style="list-style-type: none"> 1. Proper training to all the drivers involved in Airside Operations. 2. Removal of Unserviceable/ junk equipment from the airport. 3. Proper locking system of all the equipment near the parked aircraft. 4. Marking of Safety Line and following the SOP for RAMP servicing. 5. Designated vehicular lane for movement of ground support vehicles.

SAFETY PERFORMANCE INDICATORS (SPIs) FOR AIR TRAFFIC SERVICES (ATS)



Number of risk-bearing AIRPROX (Category A & B as per Air Safety Circular 05 of 2009) per 10,00,000 flights over Indian airspace

7.1 Definition

AIRPROX. The code word used in an air traffic incident report to designate aircraft proximity.

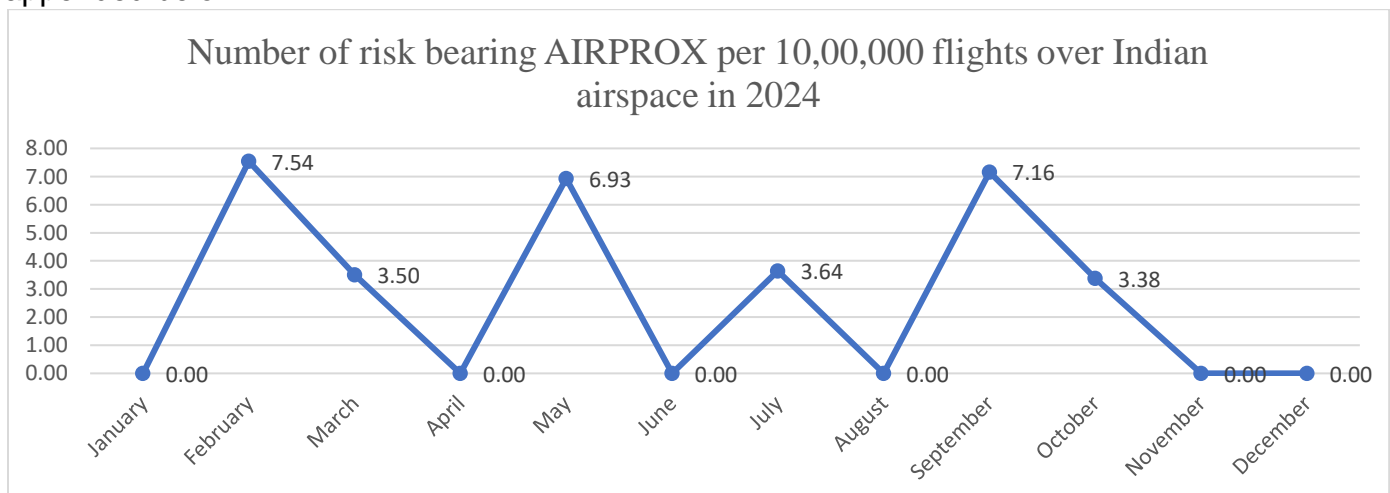
Aircraft proximity. A situation in which, in the opinion of a pilot or air traffic services personnel, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.

Aircraft proximity is classified as follows:

- Cat A- Risk of collision.** The risk classification of an aircraft proximity in which serious risk of collision has existed.
- Cat B- Safety not assured.** The risk classification of an aircraft proximity in which the safety of the aircraft may have been compromised.
- Cat C- No risk of collision.** The risk classification of an aircraft proximity in which no risk of collision has existed
- Cat D- Risk not determined.** The risk classification of an aircraft proximity in which insufficient information was available to determine the risk involved, or inconclusive or conflicting evidence precluded such determination.

7.2 Analysis of Data:

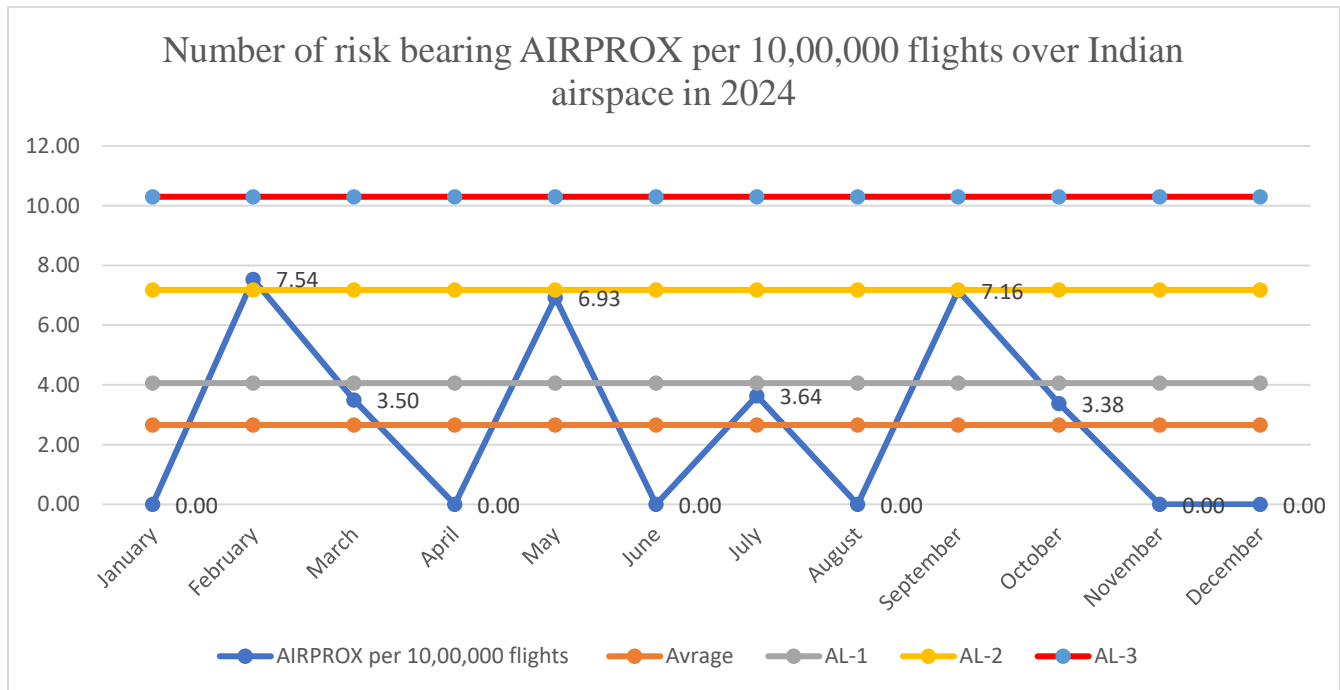
Number of reported risk-bearing AIRPROX per 10,00,000 flights during year **2024** and detailed analysis is appended below:



Month	Total Aircraft Movements (Arrival+ Departure + Overflying)	Number of risk-bearing AIRPROX (Category A & B as per Air Safety Circular 05 of 2009)	Number of risk bearing AIRPROX per 10,00,000 flights over Indian airspace (X)	Average (U)	X-U	(X-U)^2	AL-1	AL-2	AL-3
January	269766	0	0.00	2.66	-2.66	7.07	4.06	7.18	10.3
February	265256	2	7.54	2.66	4.88	23.83	4.06	7.18	10.3
March	285670	1	3.50	2.66	0.84	0.71	4.06	7.18	10.3
April	279719	0	0.00	2.66	-2.66	7.07	4.06	7.18	10.3
May	288786	2	6.93	2.66	4.27	18.21	4.06	7.18	10.3
June	270014	0	0.00	2.66	-2.66	7.07	4.06	7.18	10.3
July	274638	1	3.64	2.66	0.98	0.97	4.06	7.18	10.3
August	280474	0	0.00	2.66	-2.66	7.07	4.06	7.18	10.3
September	279462	2	7.16	2.66	4.50	20.23	4.06	7.18	10.3
October	295860	1	3.38	2.66	0.72	0.52	4.06	7.18	10.3
November	292292	0	0.00	2.66	-2.66	7.07	4.06	7.18	10.3
December	303667	0	0.00	2.66	-2.66	7.07	4.06	7.18	10.3
Total	3385604	9	2.66			106.87			

Standard Deviation =2.98

Month wise Number of risk bearing AIRPROX per 10,00,000 flights over Indian airspace in 2024 is shown below



7.3 Safety Performance Target (SPT):

Average = 2.66	Target for 2024=2.15 Not Achieved	Target for 2025= 2.15
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The Average performance for the year 2024 has been 2.66 and Alert level-2 has been breached once in the month of February. As the target of **2.15** for year **2024** has not been achieved, it has been decided that the target for **2025** shall be same as **2.15**.

7.4 Alert Level:

a) Alert level setting

Alert Levels for the year 2025		
Alert Level -1	Alert Levels for the year 2025 are same as for year 2024	4.06
Alert Level -2		7.18
Alert Level -3		10.3

b) Alert Level Trigger

An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for the current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

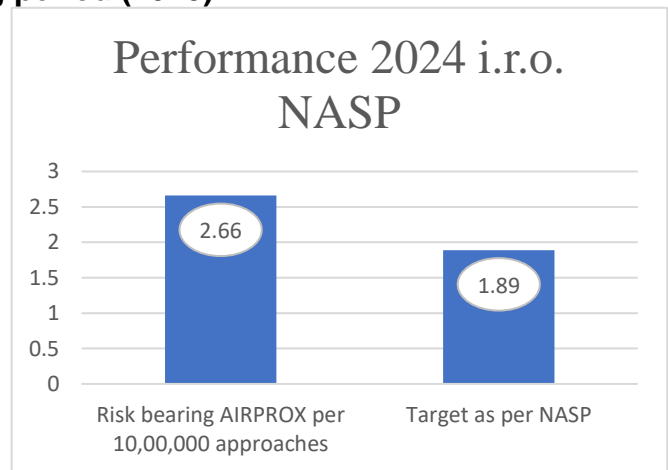
When an Alert is triggered (potential high risk or out-of-control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

7.5 Target Achievement at the end of the monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.

7.6 Comparison with National Aviation Safety Plan

The average number of risk-bearing AIRPROX (Category A & B as per Air Safety Circular 05 of 2009) per 10,00,000 flights over Indian airspace are more than the target set in NASP.



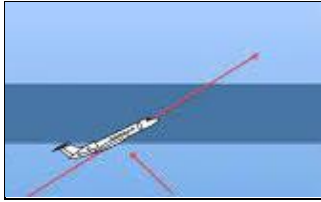
7.7 Safety Action Plan

Safety Measures Already in Place

1. AIRPROX Incidents were examined for steps taken to minimize the incidents.
2. ATS In-charges were instructed, as appropriate for follow-up actions and measures to minimize the cause to prevent future incidents.
3. Regular meetings were held with DGCA on the safety concerns arising out of the incidents and finalization of safety recommendations to prevent future incidents.
4. Corrective action plans were implemented for the training of controllers and any systemic issues identified in the investigation of incidents.
5. The Manual of Air Traffic Services (MATS) - Part 1 is published for the use and guidance of air traffic controllers to provide processes, procedures and instructions that are essential for the provision of safe and efficient air traffic services within the jurisdiction of AAI and at airports where air traffic services are provided by AAI. This manual is published in conformance to Organizational Requirements and compliance with National Regulations and Standards & Recommended practices of ICAO ANNEX 11, PANS - ATM DOC 4444 and other ICAO documents relevant to the provisions of Air Traffic Services that are uniformly applicable to all the airports.
6. Air Traffic Management Circulars (ATMCs) are issued as appropriate to address safety concerns and introduction of new procedures in the ATS System.
7. Airport Information Management System (AIMS) has been established for reporting of serious incidents/ incidents and reportable occurrences. Controllers are encouraged to report any safety issues without fear of punitive action.
8. Yearly refresher training sessions are conducted at all the stations on ATM procedures, separation standards, operational procedure, handling of emergency situations and situational awareness etc.
9. Yearly proficiency checks are conducted for each controller for all the ratings held to assess their proficiency.
10. An adequate pool of Instructors and Examiners is maintained at stations to train the ATCOs, impart training as required and carry out proficiency checks.
11. Safety workshops were conducted at Delhi and Chennai respectively on reporting of incidents, just culture, case studies and analysis of incidents for factual reporting and minimizing safety occurrences.
12. Half yearly VC meetings were conducted to share identified safety issues, causal factors with the GM ATMs (NR/WR/SR/ER/NER) or their representatives/ ATS In- charges/ SQMS In-charges and Training In-charges of major stations.
13. Quarterly VC Meetings were convened to discuss steps to minimize safety occurrences and share safety issues of the airports with the GM ATMs of airports/ SQMS In-charges and Training In-charges of major stations.
14. Evidence Based Training (EBT) on controller proficiency related common causal/ contributory factors identified through investigation of AIRPROX/ serious incidents/ incidents/ internal investigations were conducted for the surveillance controllers at all the stations having ATC simulators.

Safety Action Plan

Safety objectives	Action
<p>Reduce the Number of risk bearing AIRPROX per 10,00,000 flights over Indian airspace.</p>	<ol style="list-style-type: none"> 1. All AIRPROX Incidents will be examined for steps taken to minimize the incidents. 2. ATS In-charges will be advised, as appropriate for follow-up actions and measures to minimize the cause to prevent future incidents. 3. Regular meetings will be held with DGCA on the safety concerns arising out of the incidents and finalization of safety recommendationsto prevent future incidents. 4. Corrective action plan will be implemented for the training of controllers and any systemic issues identified in the investigation of incidents. 5. Air Traffic Management Circulars (ATMCs) will be issued as appropriate to address safety concerns and introduction of newprocedures in the ATS System. 6. Reporting of occurrences and incidents will be monitored through Airport Information Management System (AIMS). Controllers will be encouraged to report any safety issues without fear of punitive action. 7. Yearly refresher training sessions will be conducted at all the stationson ATM procedures, separation standards, operational procedure, handling of emergency situations and situational awareness etc. 8. Yearly proficiency checks will be conducted for each controller for allthe ratings held to assess their proficiency. 9. Instructors and Examiners will train the ATCOs and impart training as required, and carry out proficiency checks. 10. Safety workshops will be conducted at various stations on prevention of incidents, reporting of incidents, case studies, analysis of incidents for factual reporting and minimizing safety occurrences. 11. Half yearly VC meetings will be convened to share identified safety issues, causal factors with the Regional GM ATMs(NR/WR/SR/ER/NER)/ ATS In-charges/ SQMS In-charges and Training In-charges of major stations. 12. Quarterly VC Meetings will be convened to discuss steps to minimizesafety occurrences and share safety issues of the airports with the GM ATMs of airports/ SQMS In-charges and Training In-charges of major stations. 13. Performance Monitoring and Safety Review of ATS systems at various ATS stations will be conducted as per the provisions of ATMCNo. 5 of 2019. 14. Evidence Based Training (EBT) on controller proficiency relatedcommon causal/ contributory factors identified through investigation of AIRPROX/ serious incidents/ incidents/ internal investigations will be conducted for the surveillance controllers at all the stations having ATC simulators.



Number of aircraft not or incorrectly complying with ATC instructions (including level bust) per 10,00,000 flights over Indian airspace

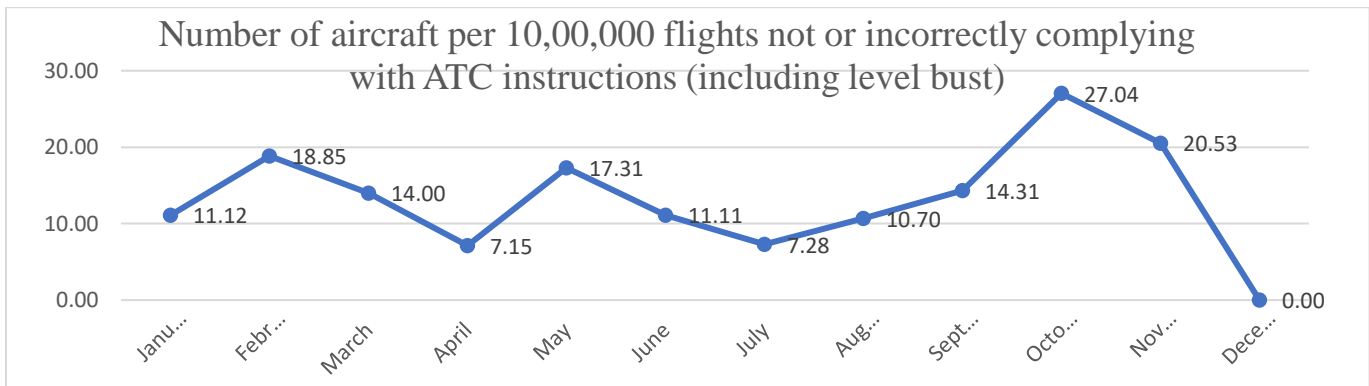
8.1 Scope

A level bust is defined as an unauthorized deviation from the ATC assigned altitude (or flight level) equal to or greater than 300 FT in Non-RVSM airspace and 200 ft. in RVSM airspace. Occurrences in which ATC gave the aircraft clearance for an incorrect altitude are not included.

All such Level Busts which occurred in AAI-administered airspace will be considered. However, this will not include those Level Busts which were caused by the ANSPs other than AAI. This also does not include those Level Busts caused by Military ATC Units e.g. IAF and Indian Navy.

8.2 Analysis of Data

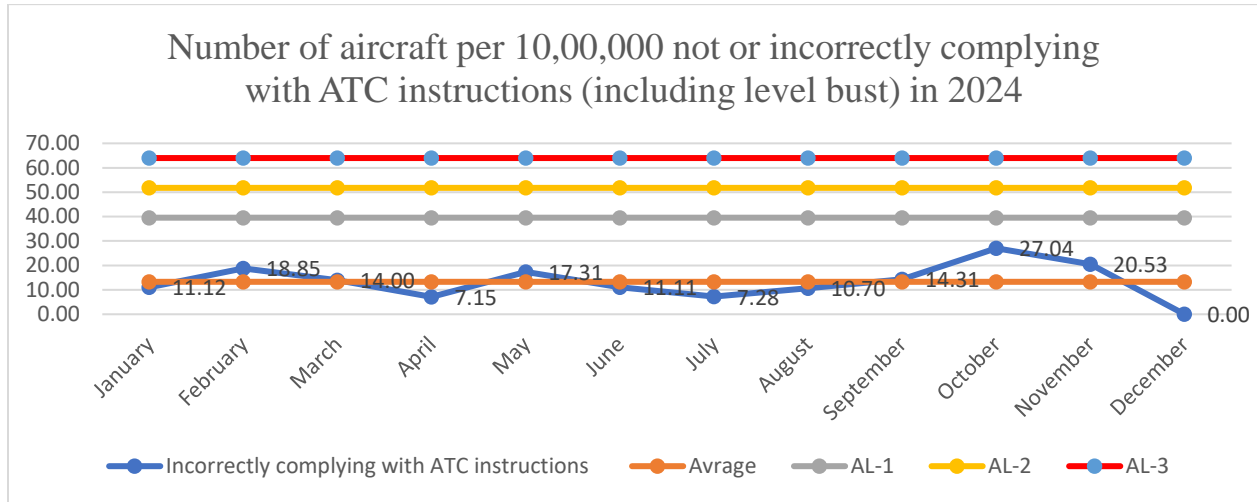
Number of aircraft per 10,00,000 not or incorrectly complying with ATC instructions (including level bust) during last year i.e. **2024** and detailed analysis is appended below



Month	Total Aircraft Movement (Arr.+ Dep. + Overflying)	Number of aircraft not or incorrectly complying with ATC instructions (including level bust)	Number of aircraft per 10,00,000 not or incorrectly complying with ATC instructions (including level bust) (X)	Average (U)	X-U	(X-U)^2	AL-1	AL-2	AL-3
January	269766	3	11.12	13.29	-2.17	4.71	39.56	51.77	63.98
February	265256	5	18.85	13.29	5.56	30.89	39.56	51.77	63.98
March	285670	4	14.00	13.29	0.71	0.50	39.56	51.77	63.98
April	279719	2	7.15	13.29	-6.14	37.72	39.56	51.77	63.98
May	288786	5	17.31	13.29	4.02	16.18	39.56	51.77	63.98
June	270014	3	11.11	13.29	-2.18	4.76	39.56	51.77	63.98
July	274638	2	7.28	13.29	-6.01	36.11	39.56	51.77	63.98
August	280474	3	10.70	13.29	-2.60	6.74	39.56	51.77	63.98
September	279462	4	14.31	13.29	1.02	1.04	39.56	51.77	63.98
October	295860	8	27.04	13.29	13.75	189.01	39.56	51.77	63.98
November	292292	6	20.53	13.29	7.24	52.36	39.56	51.77	63.98
December	303667	0	0.00	13.29	-13.29	176.67	39.56	51.77	63.98
Total	3385604	45	13.29			556.69			

Standard Deviation =6.81

Month wise Number of aircraft not or incorrectly complying with ATC instructions (including level bust) is shown below:



8.3 Safety Performance Target (SPT)

Average= 13.29	Target for 2024= 3.05 Not Achieved	Target for 2025= 3.05
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The Average performance for the year 2024 has been 13.29 and Alert levels has not been breached but average is more than target.

As the target of **3.05** for year **2024** has not been achieved, it has been decided that the target for **2025** shall be remain same as 3.05.

8.4 Alert Level:

a) Alert level setting

Alert Levels for the year 2025		
Alert Level -1	Alert Levels for the year 2025 are same as for year 2024	39.56
Alert Level -2		51.77
Alert Level -3		63.98

b) Alert Level Trigger: -

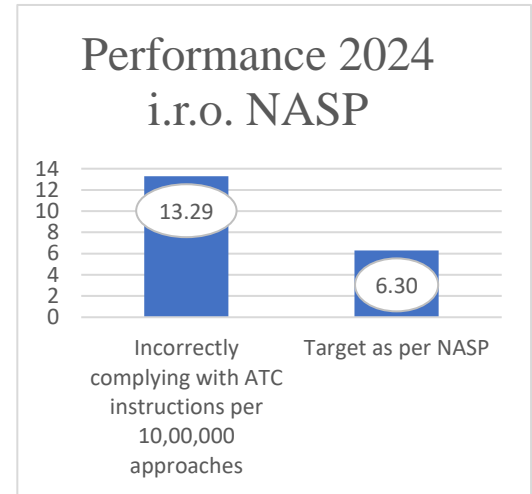
An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for the current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

When Alert is triggered (potential high risk or out of control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

8.5 Target Achievement at the end of monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.



8.6 Comparison with National Aviation Safety Plan-

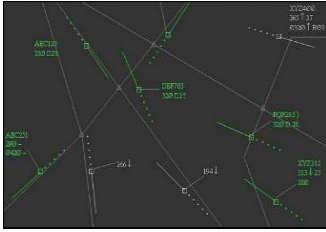
The average number of aircraft not or incorrectly complying with ATC instructions (including level bust) per 10,00,000 flights over Indian airspace are more than the target set in NASP.

8.7 Safety Action Plan-

Safety Measures already in place
<ol style="list-style-type: none"> 1. Non-compliance to ATC instructions including level bust will be examined for steps taken to minimize the incidents. 2. Non-compliance to ATC instructions including level bust reports are shared with DGCA for further necessary actions. 3. Whenever Non-compliance to ATC instructions lead to an incident, the same will be discussed with DGCA during the regular meetings on the safety concerns arising out of the non-compliance and finalization of safety recommendations to prevent future incidents. 4. Reporting of occurrences and incidents will be monitored through Airport Information Management System (AIMS). Controllers will be encouraged to report any safety issues without fear of punitive action.

Safety Action Plan

Safety objectives	Action
Reduce the Number of aircraft not or incorrectly with ATC instructions (including level bust) per 10,00,000 flights over Indian airspace.	<ol style="list-style-type: none"> 1. Non-compliance to ATC instructions including level bust will be examined for steps taken to minimize the incidents. 2. Non-compliance to ATC instructions including level bust reports are shared with DGCA for further necessary actions. 3. Whenever Non-compliance to ATC instructions lead to an incident, the same will be discussed with DGCA during the regular meetings on the safety concerns arising out of the non-compliance and finalization of safety recommendations to prevent future incidents. 4. Reporting of occurrences and incidents will be monitored through Airport Information Management System (AIMS). Controllers will be encouraged to report any safety issues without fear of punitive action



Number of AIRPROX attributable to ATC/ system failure per 10,00,000 movements over Indian Airspace

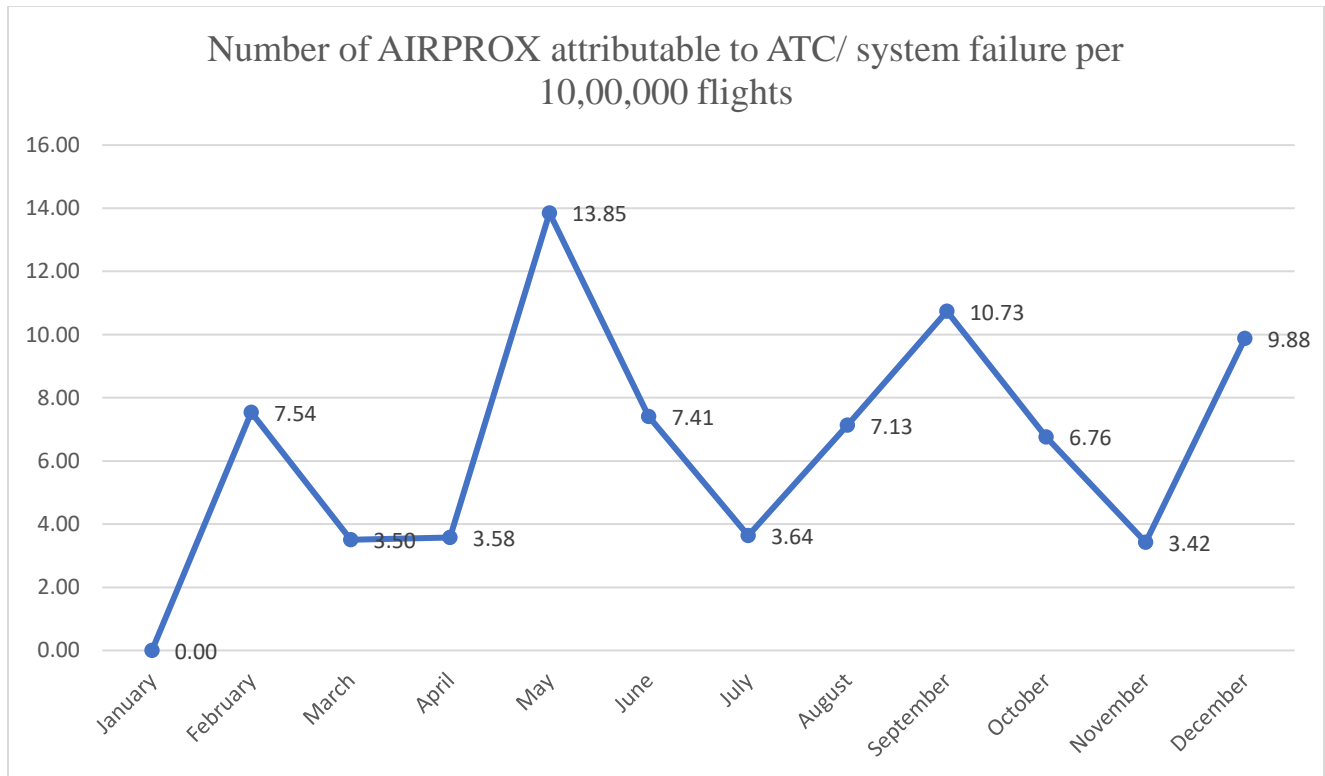
9.1.Scope

Separation minima infringement is an infringement of applicable separation minima between two IFR flights in AAI-administered airspace. Applicable separation minima are as given in Chapters 5, 6, 7, and 8 of Manual of Air Traffic Services-Part1.

Only those occurrences of separation minima infringements will be considered in which ATC has directly or indirectly contributed to the incident which has occurred in AAI-administered airspace. However, this does not include those occurrences of separation minima infringements that were caused by the ANSPs other than AAI, pilots, Military ATC Units, or any other agency.

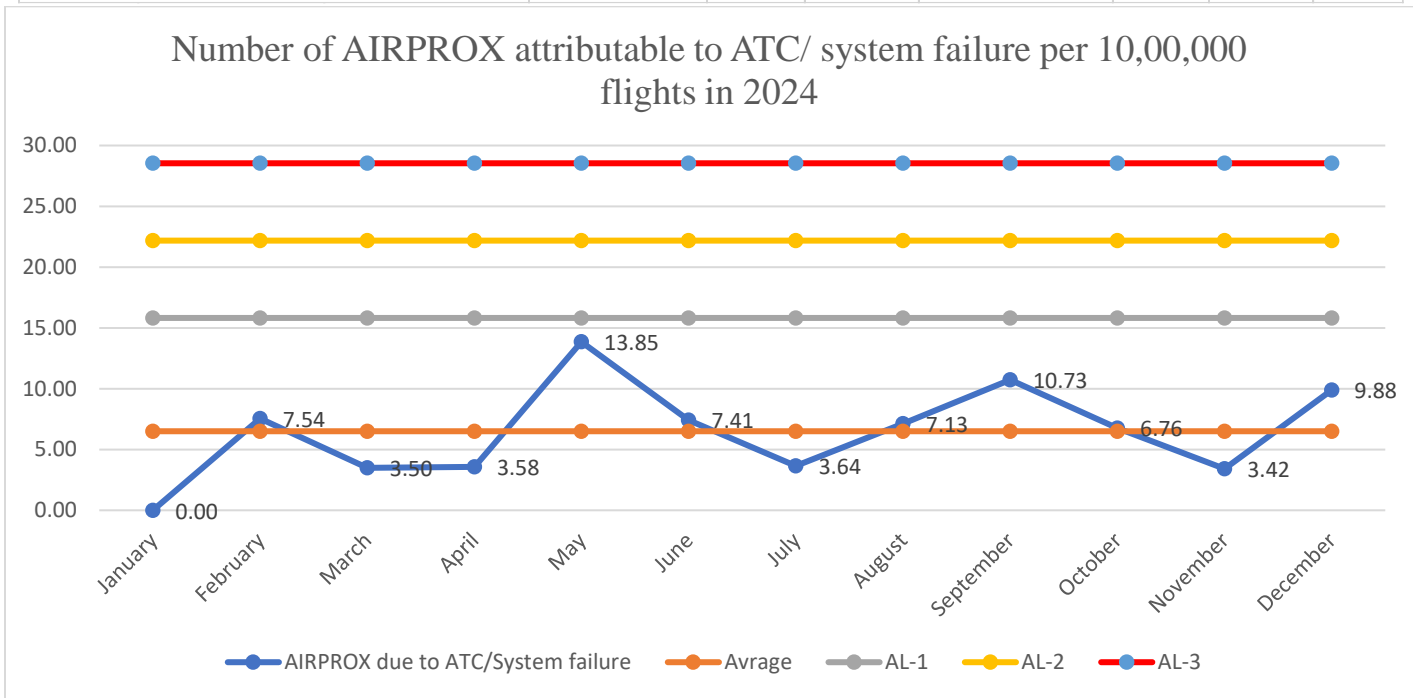
9.2 Analysis of Data

Number of AIRPROX attributable to ATC/ system failure per 10,00,000 movements during last year i.e. **2024** and detailed analysis is appended below



Month	Total Aircraft Movement (Arr.+ Dep. + Overflying)	Number of AIRPROX attributable to ATC/ system failure	Number of AIRPROX attributable to ATC/ system failure per 10,00,000 (X)	Average (U)	X-U	(X-U)^2	AL-1	AL-2	AL-3
January	269766	0	0.00	6.50	-6.50	42.25	15.82	22.18	28.54
February	265256	2	7.54	6.50	1.04	1.08	15.82	22.18	28.54
March	285670	1	3.50	6.50	-3.00	9.00	15.82	22.18	28.54
April	279719	1	3.58	6.50	-2.92	8.56	15.82	22.18	28.54
May	288786	4	13.85	6.50	7.35	54.04	15.82	22.18	28.54
June	270014	2	7.41	6.50	0.91	0.82	15.82	22.18	28.54
July	274638	1	3.64	6.50	-2.86	8.17	15.82	22.18	28.54
August	280474	2	7.13	6.50	0.63	0.40	15.82	22.18	28.54
September	279462	3	10.73	6.50	4.23	17.93	15.82	22.18	28.54
October	295860	2	6.76	6.50	0.26	0.07	15.82	22.18	28.54
November	292292	1	3.42	6.50	-3.08	9.48	15.82	22.18	28.54
December	303667	3	9.88	6.50	3.38	11.42	15.82	22.18	28.54
Total	3385604	22	6.50			163.22			

Standard Deviation =3.69



9.3 Safety Performance Target:

Average= 6.50	Target for 2024=9.74 Achieved	Target for 2025= 9.45 (reduction of 3%)
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The Average performance for the year 2024 has been 6.50 and Alert level has not been breached in the year 2024.

As the target of **9.74** for year **2024** has been achieved, it has been decided that the target for year **2025** shall be set as **9.45** (with 3% reduction).

9.4 Alert Level:

a) Alert level setting

Alert Levels for year 2025		
Alert Level - 1	AVG +1 SD= 6.50+3.69	10.19
Alert Level - 2	AVG +2 SD= 6.50+2x3.69	13.88
Alert Level - 3	AVG +3SD= 6.50+3x3.69	17.57

b) Alert Level Trigger

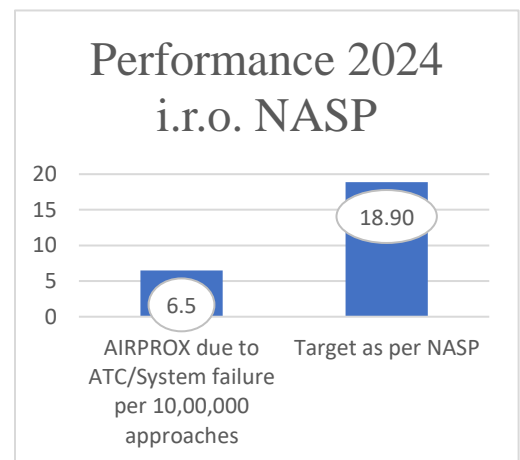
An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

When Alert is triggered (potential high risk or out of control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

9.5 Target Achievement at the end of monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.



9.6 Comparison with National Aviation Safety Plan-

The average number of AIRPROX attributable to ATC/ system failure per 10, 00,000 movements are less than the target set in NASP.

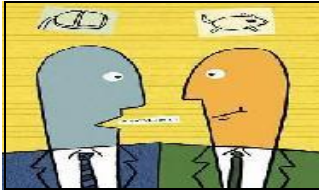
9.7 Safety Action Plan

Safety Measures Already in Place

1. AIRPROX Incidents will be examined for steps taken to minimize the incidents.
2. ATS In-charges will be advised, as appropriate for follow-up actions and measures to minimize the cause to prevent future incidents.
3. Regular meetings will be held with DGCA on the safety concerns arising out of the incidents and finalization of safety recommendations to prevent future incidents.
4. Corrective action plan will be implemented for the training of controllers and any systemic issues identified in the investigation of incidents.
5. Air Traffic Management Circulars (ATMCs) will be issued as appropriate to address safety concerns and introduction of new procedures in the ATS System.
6. Reporting of occurrences and incidents will be monitored through Airport Information Management System (AIMS). Controllers will be encouraged to report any safety issues without fear of punitive action.
7. Yearly refresher training sessions will be conducted at all the stations on ATM procedures, separation standards, operational procedure, handling of emergency situations and situational awareness etc.
8. Yearly proficiency checks will be conducted for each controller for all the ratings held to assess their proficiency.
9. Instructors and Examiners will train the ATCOs and impart training as required, and carry out proficiency checks.
10. Safety workshops will be conducted at various stations on prevention of incidents, reporting of incidents, case studies, analysis of incidents for factual reporting and minimizing safety occurrences.
11. Half yearly VC meetings will be convened to share identified safety issues, causal factors with the Regional GM ATMs (NR/WR/SR/ER/NER)/ ATS In-charges/ SQMS In-charges and Training In-charges of major stations.
12. Quarterly VC Meetings will be convened to discuss steps to minimize safety occurrences and share safety issues of the airports with the GM ATMs of airports/ SQMS In-charges and Training In-charges of major stations.
13. Performance Monitoring and Safety Review of ATS systems at various ATS stations will be conducted as per the provisions of ATMC No. 5 of 2019.
14. Evidence Based Training (EBT) on controller proficiency related common causal/ contributory factors identified through investigation of AIRPROX/ serious incidents/ incidents/ internal investigations will be conducted for the surveillance controllers at all the stations having ATC simulators.

Safety Action Plan

Safety objectives	Action
Reduce the Number of AIRPROX attributable to ATC/System failure	<ol style="list-style-type: none"> 1. All AIRPROX Incidents were examined for steps taken to minimize the incidents. 2. ATS In-charges were instructed, as appropriate for follow-up actions and measures to minimize the cause to prevent future incidents. 3. Regular meetings were held with DGCA on the safety concerns arising out of the incidents and finalization of safety recommendations to prevent future incidents 4. Corrective action plans were implemented for the training of controllers and any systemic issues identified in the investigation of incidents. 5. The Manual of Air Traffic Services (MATS) - Part 1 is published for the use and guidance of air traffic controllers to provide processes, procedures and instructions that are essential for the provision of safe and efficient air traffic services within the jurisdiction of AAI and at airports where air traffic services are provided by AAI. This manual is published in conformance to Organizational Requirements and compliance with National Regulations and Standards & Recommended practices of ICAO ANNEX 11, PANS - ATM DOC 4444 and other ICAO documents relevant to the provisions of Air Traffic Services that are uniformly applicable to all the airports. 6. Air Traffic Management Circulars (ATMCs) are issued as appropriate to address safety concerns and introduction of new procedures in the ATS System. 7. Airport Information Management System (AIMS) has been established for reporting of serious incidents/ incidents and reportable occurrences. Controllers are encouraged to report any safety issues without fear of punitive action. 8. Yearly refresher training sessions are conducted at all the stations on ATM procedures, separation standards, operational procedure, handling of emergency situations and situational awareness etc. 9. Yearly proficiency checks are conducted for each controller for all the ratings held to assess their proficiency. 10. An adequate pool of Instructors and Examiners is maintained at stations to train the ATCOs, impart training as required and carry out proficiency checks. 11. Safety workshops were conducted at Delhi and Chennai respectively on reporting of incidents, just culture, case studies and analysis of incidents for factual reporting and minimizing safety occurrences. 12. Half yearly VC meetings were conducted to share identified safety issues, causal factors with the GM ATMs (NR/WR/SR/ER/NER) or their representatives/ ATS In-charges/ SQMS In-charges and Training In-charges of major stations. 13. Quarterly VC Meetings were convened to discuss steps to minimize safety occurrences and share safety issues of the airports with the GM ATMs of airports/ SQMS In-charges and Training In-charges of major stations. 14. Evidence Based Training (EBT) on controller proficiency related common causal/ contributory factors identified through investigation of airprox/ serious incidents/ incidents/ internal investigations were conducted for the surveillance controllers at all the stations having ATC simulators.



Communication Errors

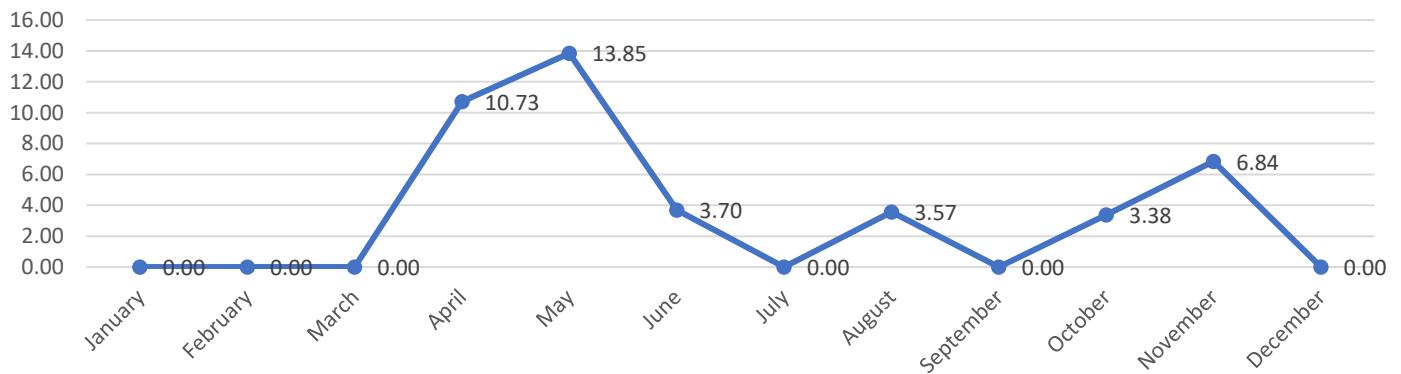
10.1 Definition

Communication errors mean errors due to miscommunication in ATC on account of absent-mindedness and complacency; incorrect phraseologies or inappropriate use of plain English that results in ambiguity; call sign confusion due to call sign similarity; improper enunciation and articulation of voice; hearing expectancy; not hearing a transmission at all; confused instructions due to the similarity in SIDs/STARs or waypoints; High rate of speech or unnecessary pauses; read back/hear back error etc.

10.2 Analysis of Data

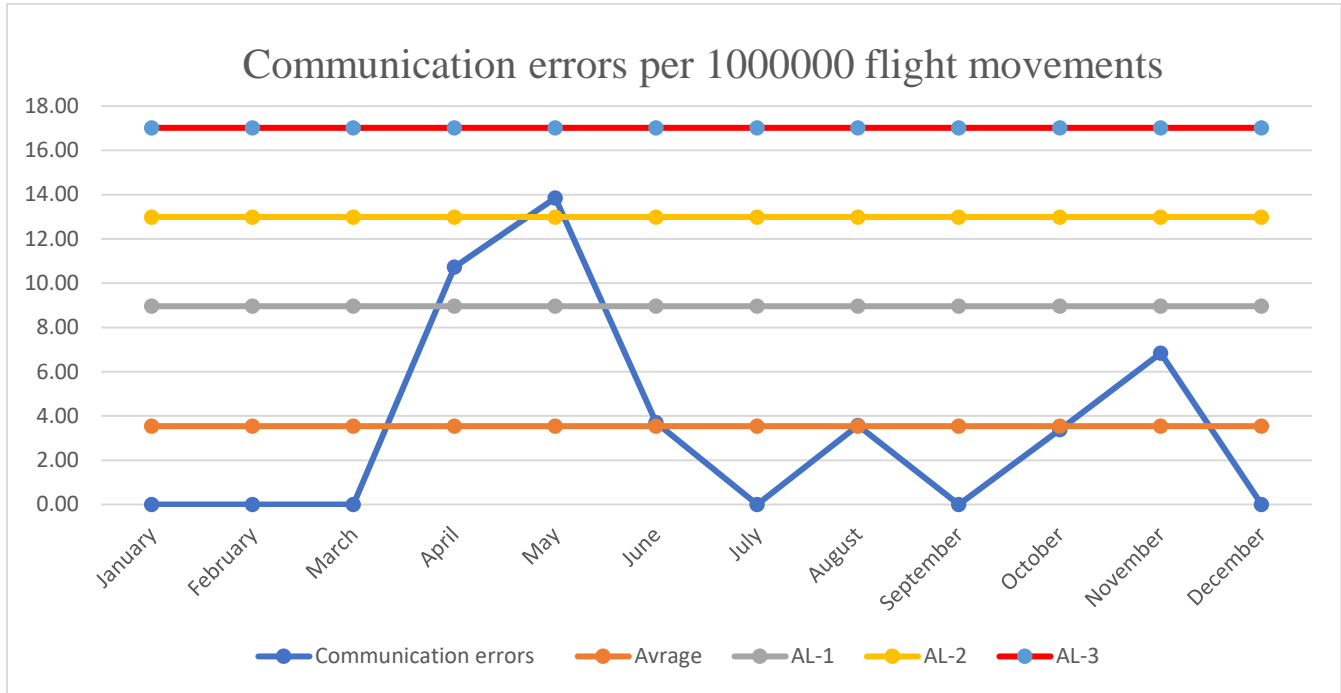
Communication errors during year **2024** and detailed analysis is appended below

Communication errors per 10,00,000 flight movements in 2024



Month	Total Aircraft Movement (Arr.+ Dep. + Overflying)	Communication Errors	Communication errors per 1000000 flight movements (X)	Average (U)	X-U	(X-U) ²	AL-1	AL-2	AL-3
January	269766	0	0.00	3.54	-3.54	12.53	8.96	12.99	17.02
February	265256	0	0.00	3.54	-3.54	12.53	8.96	12.99	17.02
March	285670	0	0.00	3.54	-3.54	12.53	8.96	12.99	17.02
April	279719	3	10.73	3.54	7.19	51.62	8.96	12.99	17.02
May	288786	4	13.85	3.54	10.31	106.32	8.96	12.99	17.02
June	270014	1	3.70	3.54	0.16	0.03	8.96	12.99	17.02
July	274638	0	0.00	3.54	-3.54	12.53	8.96	12.99	17.02
August	280474	1	3.57	3.54	0.03	0.00	8.96	12.99	17.02
September	279462	0	0.00	3.54	-3.54	12.53	8.96	12.99	17.02
October	295860	1	3.38	3.54	-0.16	0.03	8.96	12.99	17.02
November	292292	2	6.84	3.54	3.30	10.91	8.96	12.99	17.02
December	303667	0	0.00	3.54	-3.54	12.53	8.96	12.99	17.02
Total	3385604	12	3.54			244.09			

Standard Deviation =4.51



10.3 Safety Performance Target:

Average = 3.54	Target for 2024=15.00 Achieved	Target for 2025= 14.55 (reduction of 3%)
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The Average performance for the year 2024 has been 3.54 and Alert level-2 has been breached once. As the target of **15.00** for year 2024 has been achieved hence it has been decided that the target for year 2025 shall be **14.55** (i.e. reduction of 3%).

10.4 Alert Level:

a) Alert level setting

Alert Levels for year 2025			
Alert Level -1	AVG +1 SD	=3.54+ 1 X 4.51	8.05
Alert Level -2	AVG +2 SD	=3.54+ 2x 4.51	12.56
Alert Level -3	AVG+ 3SD	=3.54+ 3X 4.51	17.07

b) Alert Level Trigger

An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

When Alert is triggered (potential high risk or out of control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

10.5 Target Achievement at the end of monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.

10.6 Safety Action Plan

Safety Measures Already in Place

1. All Communication Errors were examined for steps taken to minimize the incidents.
2. ATS In-charges were advised, as appropriate for follow-up actions and measures to minimize the cause to prevent future incidents.
3. Whenever the Communication Errors led to an incident, the same was discussed with DGCA during the regular meetings on the safety concerns arising out of the error and finalization of safety recommendations to prevent future incidents.
4. Corrective action plan was implemented for the training of controllers and any systemic issues identified in the investigation of incidents.
5. Reporting of occurrences and incidents are monitored through Airport Information Management System (AIMS). Controllers are encouraged to report any safety issues without fear of punitive action.
6. Yearly refresher training sessions were conducted at the ATC centers on Communication Errors and prevention of Communication Errors, Readback-Hear back errors.
7. An adequate pool of Instructors and Examiners are maintained at stations to train the ATCOs, impart training as required and sensitize the controllers on communication errors, readback -hear back errors etc.
8. Half yearly VC meetings were conducted to share identified safety issues, causal factors with the Regional GM ATMs (NR/WR/SR/ER/NER)/ ATS In-charges/ SQMS In-charges and Training In-charges of major stations.
9. Quarterly VC Meetings were convened to discuss steps to minimize safety occurrences and share safety issues of the airports with the GM ATMs of airports/ SQMS In-charges and Training In-charges of major stations.

Safety Action Plan

Safety objectives	Action
<p>Reduce the number of Communication Errors.</p>	<ol style="list-style-type: none"> 1. All Communication Errors will be examined for steps taken to minimize the incidents. 2. ATS In-charges will be advised, as appropriate for follow-up actions and measures to minimize the cause to prevent future incidents. 3. Whenever the Communication Errors lead to an incident, the same will be discussed with DGCA during the regular meetings on the safety concerns arising out of the error and finalization of safety recommendations to prevent future incidents. 4. Corrective action plan will be implemented for the training of controllers and any systemic issues identified in the investigation of incidents. 5. Reporting of occurrences and incidents will be monitored through Airport Information Management System (AIMS). Controllers will be encouraged to report any safety issues without fear of punitive action. 6. Yearly refresher training sessions will be conducted at the ATC centers on Communication Errors and prevention of Communication Errors, Readback-Hear-back errors. 7. Instructors and Examiners will train the ATCOs and impart training as required, and sensitize the controllers on communication errors, readback-hearback errors etc. 8. Half yearly VC meetings will be convened to share identified safety issues, causal factors with the Regional GM ATMs (NR/WR/SR/ER/NER)/ ATS In-charges/ SQMS In-charges and Training In-charges of major stations. 9. Quarterly VC Meetings will be convened to discuss steps to minimize safety occurrences and share safety issues of the airports with the GM ATMs of airports/ SQMS In-charges and Training In-charges of major stations.



**Non-Standard
Phraseology Incidents**





Number of Laser interferences per 10,000 movements

11.1 Scope

The potentially hazardous visual effects of lasers are generally only visible during night time. The lasers produce an intense, coherent directional beam of light with wave lengths covering the visual spectrum of 400-700nm.

The main visual effects are:

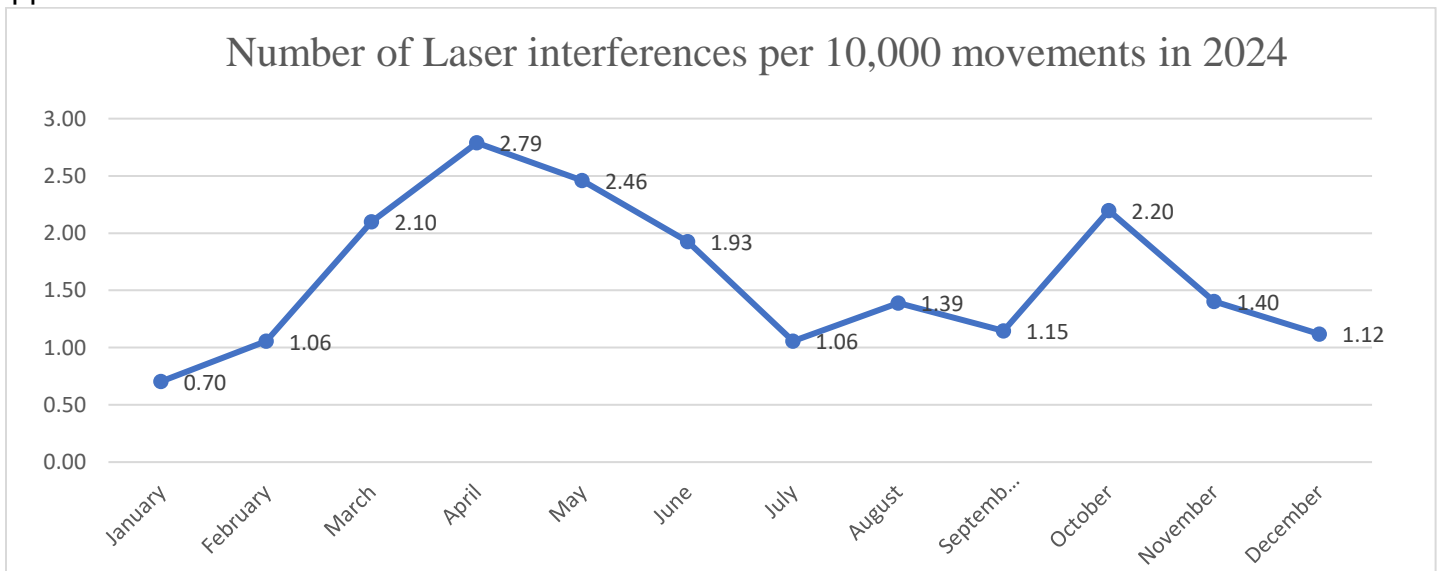
Distraction and Startle: This occurs when an unexpected laser (or other bright light) can distract a pilot during a night time take-off or approach/landing.

Glare and Disruption: This occurs as the intensity of the laser light increases such that it starts to interfere with vision; night vision starts to deteriorate.

Temporary Flash blindness: This effect is similar to that experienced when looking at a bright camera flash. There is no injury, but a portion of the visual field is temporarily knocked out. Sometimes there are 'after images.

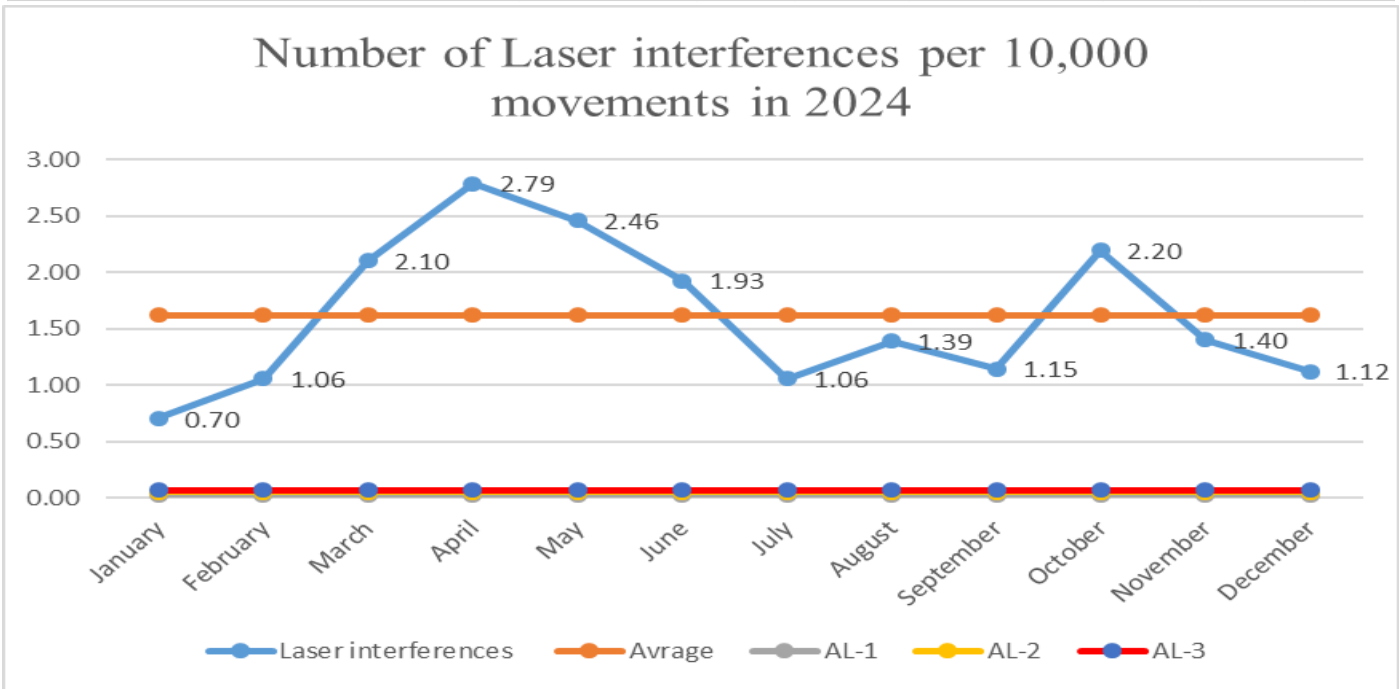
11.2 Analysis of Data

Number of Laser interferences per 10,000 movements during year **2024** and detailed analysis is appended below.



Month	Total Aircraft Movement (Arr.+ Dep. + Overflying)	Number of Laser interferences	Value of SPI per 10,000 movements (X)	Average (U)	X-U	(X-U)^2	AL-1	AL-2	AL-3
January	269766	19	0.70	1.62	-0.92	0.84	0.03	0.05	0.07
February	265256	28	1.06	1.62	-0.56	0.32	0.03	0.05	0.07
March	285670	60	2.10	1.62	0.48	0.23	0.03	0.05	0.07
April	279719	78	2.79	1.62	1.17	1.37	0.03	0.05	0.07
May	288786	71	2.46	1.62	0.84	0.70	0.03	0.05	0.07
June	270014	52	1.93	1.62	0.31	0.09	0.03	0.05	0.07
July	274638	29	1.06	1.62	-0.56	0.32	0.03	0.05	0.07
August	280474	39	1.39	1.62	-0.23	0.05	0.03	0.05	0.07
September	279462	32	1.15	1.62	-0.47	0.23	0.03	0.05	0.07
October	295860	65	2.20	1.62	0.58	0.33	0.03	0.05	0.07
November	292292	41	1.40	1.62	-0.22	0.05	0.03	0.05	0.07
December	303667	34	1.12	1.62	-0.50	0.25	0.03	0.05	0.07
Total	3385604	548	1.62			4.78			

Standard Deviation =0.63



11.3 Safety Performance Target (SPT)

Average = 1.62	Target for 2024=0.0069 Not Achieved	Target for 2025= 0.0069
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The Average performance for the year 2024 has been 1.62 and the average is more than target. As the target of **0.0069** for year **2024** has not been achieved, hence it has been decided that the target for year **2025** shall be as **0.0069**.

11.4 Alert Level:**a) Alert level setting**

Alert Levels for year 2025		
Alert Level -1	Alert Levels for the year 2025 are same as for year 2024	0.03
Alert Level -2		0.05
Alert Level -3		0.07

b) Alert Level Trigger

An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for the current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

When Alert is triggered (potential high risk or out of control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

11.5 Target Achievement at the end of monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.

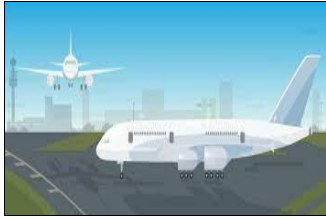
11.6 Safety Action Plan**Safety Measures Already in Place**

1. Laser interference reports were shared with Aerodrome operator/ AOCC/ APD as the case may be, to take necessary actions in coordination with local administration.
2. Laser interference reports were shared with DGCA for further necessary actions.
3. Reporting of occurrences and incidents was monitored through Airport Information Management System (AIMS) and other sources.
4. Refresher course/ sensitization classes were conducted to sensitize the controller on the hazards due to laser interference.

Safety Action Plan

Safety objectives	Action
Reduce the Number of Laser interferences.	<ol style="list-style-type: none">1. Laser interference reports will be shared with Aerodrome operator/ AOCC/ APD as the case may be, to take necessary actions in coordination with local administration.2. Laser interference reports are shared with DGCA for further necessary actions.3. Reporting of occurrences and incidents will be monitored through Airport Information Management System (AIMS) and other sources.4. Refresher course/ sensitization classes will be conducted to sensitize the controllers on the hazards due to laser interference.





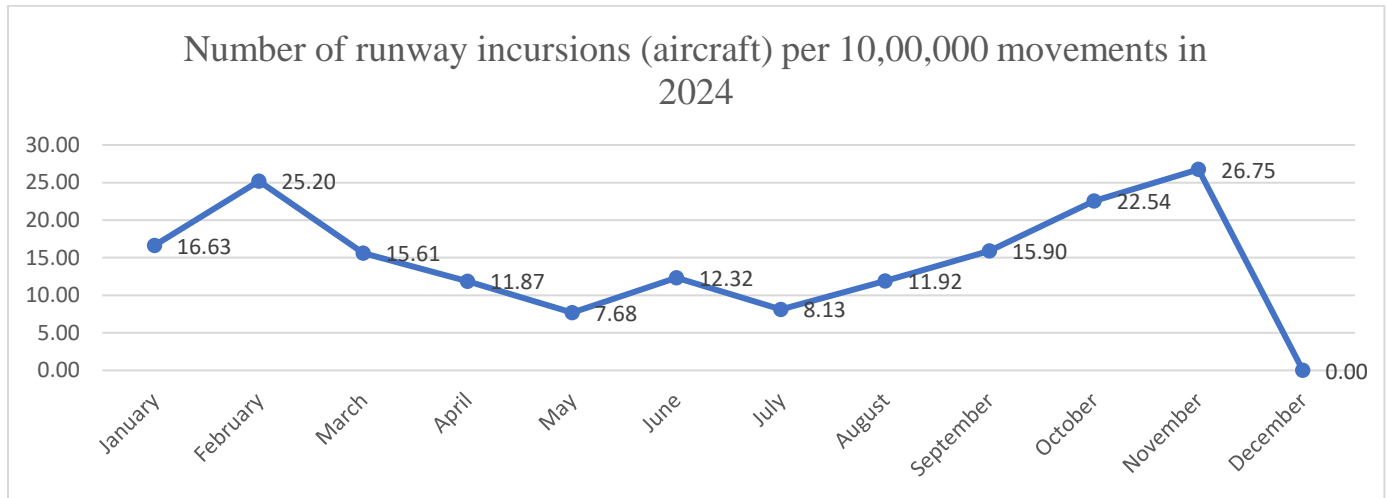
Number of runway incursions (aircraft) per 10,00,000 movements

12.1 Scope:

Runway Incursion means any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.

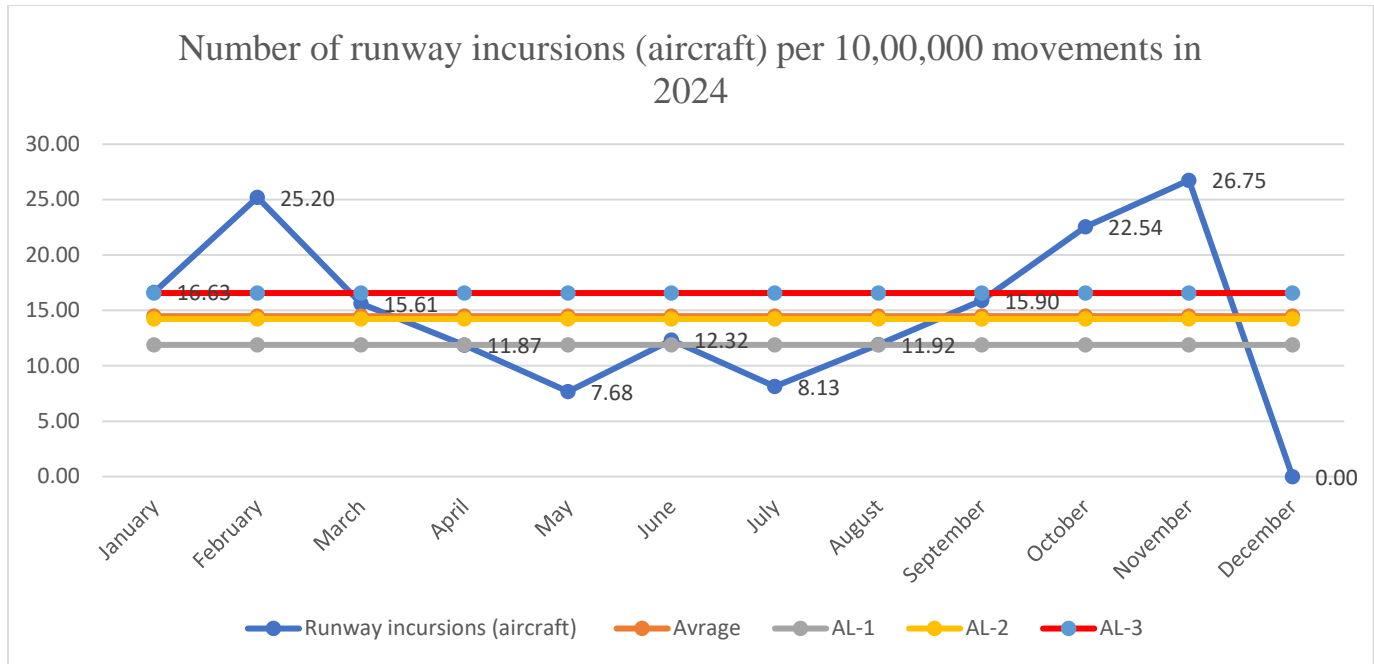
12.2 Analysis of Data

Number of runway incursions (aircraft) per 10,00,000 movements during year **2024** and detailed analysis is appended below.



Month	Total Aircraft Movement (Arrival + Departure)	Number of runway incursions (aircraft)	Value of SPI per 1000000 movements (X)	Average (U)	X-U	(X-U)^2	AL-1	AL-2	AL-3
January	240470	4	16.63	14.48	2.16	4.66	11.89	14.23	16.57
February	238078	6	25.20	14.48	10.73	115.06	11.89	14.23	16.57
March	256269	4	15.61	14.48	1.13	1.28	11.89	14.23	16.57
April	252647	3	11.87	14.48	-2.60	6.76	11.89	14.23	16.57
May	260504	2	7.68	14.48	-6.80	46.21	11.89	14.23	16.57
June	243466	3	12.32	14.48	-2.15	4.64	11.89	14.23	16.57
July	245948	2	8.13	14.48	-6.34	40.24	11.89	14.23	16.57
August	251663	3	11.92	14.48	-2.55	6.53	11.89	14.23	16.57
September	251536	4	15.90	14.48	1.43	2.04	11.89	14.23	16.57
October	266168	6	22.54	14.48	8.07	65.08	11.89	14.23	16.57
November	261684	7	26.75	14.48	12.27	150.67	11.89	14.23	16.57
December	271251	0	0.00	14.48	-14.48	209.53	11.89	14.23	16.57
Total	3039684	44	14.48			652.69			

Standard Deviation =7.37



12.3 Safety Performance Target:

Average 14.48	=	Target for 2024=10.55 Not Achieved	Target for 2025= 10.55
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The Average performance for the year 2024 has been 14.48 and Alert level AL-3 has been breached thrice in February, October and November.

As the target of **10.55** for year **2024** has not been achieved, it has been decided that the target for year **2025** shall be same as 10.55.

12.4 Alert Level:

a) Alert level setting

Alert Levels for the year 2025		
Alert Level -1	Alert Levels for the year 2025 are same as for year 2024	11.89
Alert Level -2		14.23
Alert Level -3		16.57

b) Alert Level Trigger

An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

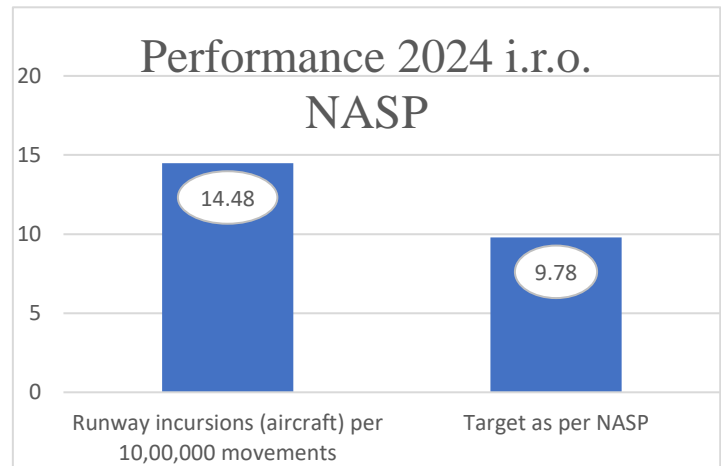
When Alert is triggered (potential high risk or out of control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

12.5 Target Achievement at the end of the monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.

12.6 Comparison with National Aviation Safety Plan-

The average number of runway incursions (aircraft) per 10,00,000 movements are more than the target set in NASP.



12.7 Safety Action Plan

Safety Measures Already in Place

1. All runway incursions were examined and steps were taken to minimize the incidents. ATS In-charges were instructed for follow-up actions as envisaged and appropriate to minimize the cause to prevent future incidents.
2. Regular meetings were held with DGCA on the safety concerns arising out of the incidents and finalization of safety recommendations/ corrective actions to prevent future incidents.
3. Corrective action plans were implemented for the training of controllers and any systemic issues identified in the investigation of incidents.
4. The Manual of Air Traffic Services (MATS) - Part 1 is published for the use and guidance of air traffic controllers to provide processes, procedures and instructions that are essential for the provision of safe and efficient air traffic services within the jurisdiction of AAI and at airports where air traffic services are provided by AAI. This manual is published in conformance to Organizational Requirements and compliance with National Regulations and Standards & Recommended practices of ICAO ANNEX 11, PANS - ATM DOC 4444 and other ICAO documents relevant to the provisions of Air Traffic Services that are uniformly applicable to all the airports.
5. Air Traffic Management Circulars (ATMCs) are issued to address safety concerns and new procedures in the ATS System.
6. Airport Information Management System (AIMS) has been established for reporting of accidents/ serious incidents/ incidents and reportable occurrences.
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8. Yearly refresher training sessions are conducted at stations on operational procedure, handling of emergency situations and situational awareness improvement etc.
9. Yearly proficiency checks are conducted for each controller for all the ratings held to assess their proficiency.

10. An adequate pool of Instructors and Examiners is maintained at stations to train the ATCOs, impart training as required and carry out proficiency checks.
11. Safety workshops were conducted at Delhi and Chennai respectively on reporting of incidents, just culture and analysis of incidents for factual reporting and minimizing safety occurrences.
12. Half yearly VC meetings were conducted to share identified safety issues, causal factors with the GM ATMs (NR/WR/SR/ER/NER) or their representatives/ ATS In- charges/ SQMS In-charges and Training In-charges of major stations.
13. Quarterly VC Meetings were convened/ chaired by the GM (ATM-SQMS) to discuss steps to minimize safety occurrences and share safety issues of the airports with the GM ATMs of airports/ SQMS In-charges and Training In-charges of major

Safety Action Plan

Safety objectives	Action
Reduce the Number of runway incursions (aircraft) per 10,00,000 movements	<ol style="list-style-type: none"> 1. All Runway Incursions will be examined for steps taken to minimize the incidents. 2. ATS In-charges will be advised, as appropriate for follow-up actions and measures to minimize the cause to prevent future incidents. 3. Regular meetings will be held with DGCA on the safety concerns arising out of the incidents and finalization of safety recommendations to prevent future incidents. 4. Corrective action plan will be implemented for the training of controllers and any systemic issues identified in the investigation of incidents. 5. Air Traffic Management Circulars (ATMCs) will be issued as appropriate to address safety concerns and introduction of new procedures in the ATS System. 6. Reporting of occurrences and incidents will be monitored through Airport Information Management System (AIMS). Controllers will be encouraged to report any safety issues without fear of punitive action. 7. Surface Movement Ground Control System, wherever installed will be used to improve situational awareness and reduce the risk of human error. 8. Yearly refresher training sessions will be conducted at all the stations on ATM procedures, prevention of runway incursions, ground infrastructure, taxi & parking procedure, operational procedure and situational awareness etc. 9. Yearly proficiency checks will be conducted for each controller for all the ratings held to assess their proficiency. 10. Instructors and Examiners will train the ATCOs and impart training as required, and carry out proficiency checks. 11. Safety workshops will be conducted at various stations on prevention of incidents, reporting of incidents, case studies,

	<p>analysis of incidents for factual reporting and minimizing safety occurrences.</p> <ol style="list-style-type: none">12. Half yearly VC meetings will be convened to share identified safety issues, causal factors with the Regional GM ATMs (NR/WR/SR/ER/NER)/ ATS In-charges/ SQMS In-charges and Training In-charges of major stations.13. Quarterly VC Meetings will be convened to discuss steps to minimize safety occurrences and share safety issues of the airports with the GM ATMs of airports/ SQMS In-charges and Training In-charges of major stations.14. Performance Monitoring and Safety Review of ATS systems at various ATS stations will be conducted as per the provisions of ATMC No. 5 of 2019.
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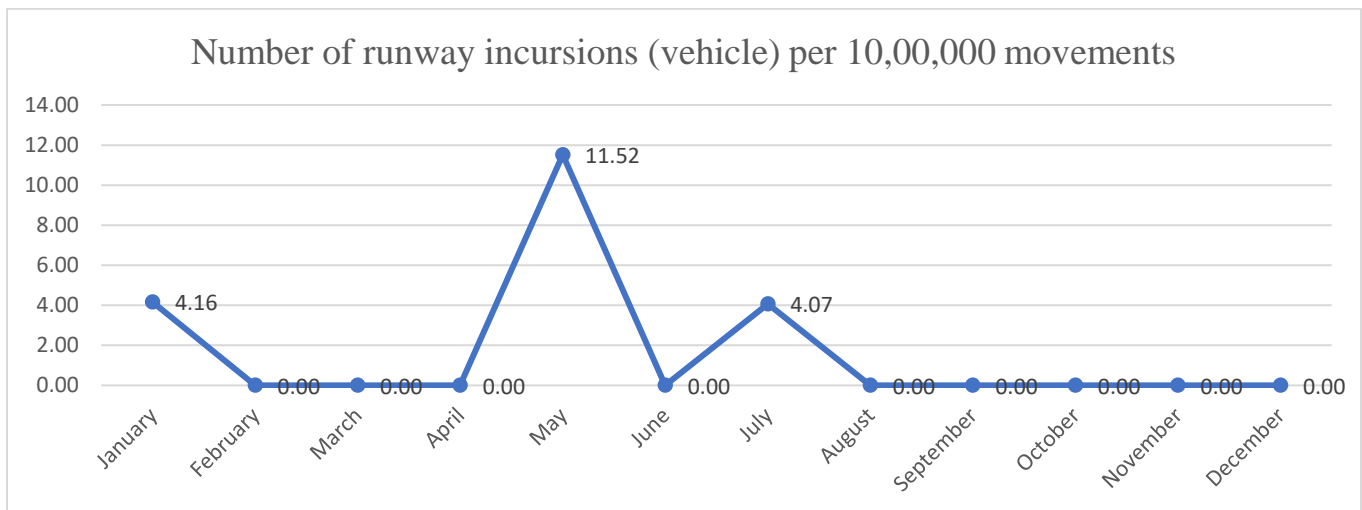
Number of runway incursions (vehicle) per 10,00,000 movements

13.1 Scope:

Runway Incursion means any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.

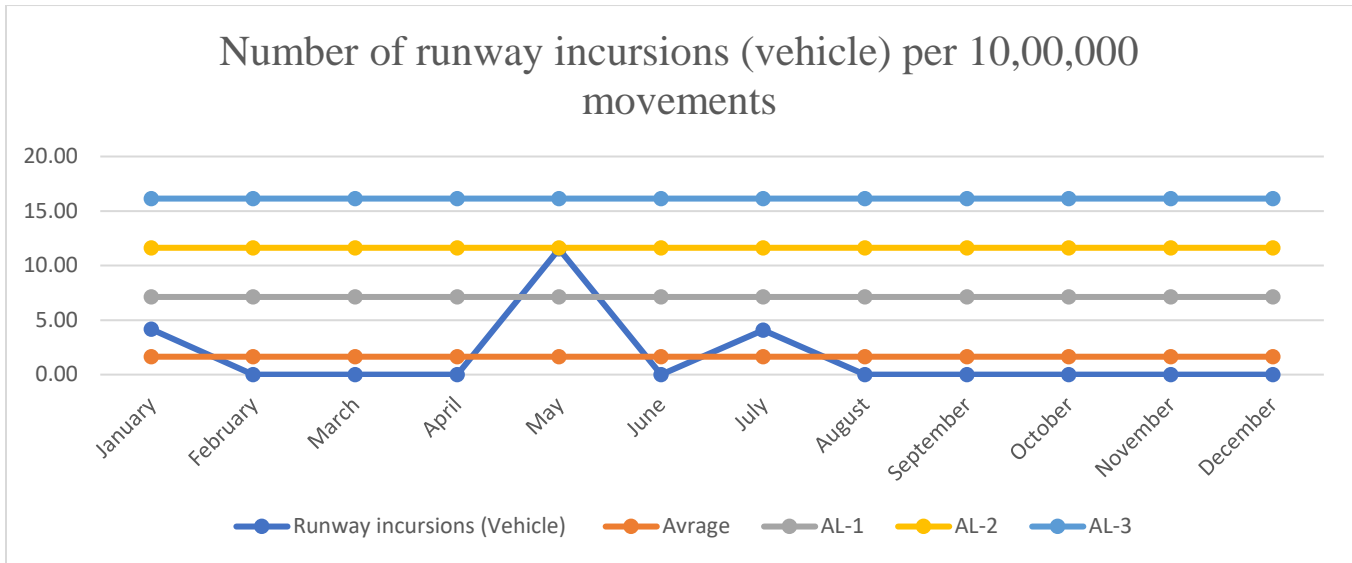
13.2 Analysis of Data:

Number of runway incursions (vehicle) per 10,00,000 movements during year **2024** and detailed analysis is appended below



Month	Total Aircraft Movement (Arrival + Departure)	Number of runway incursions (vehicle)	Number of runway incursions (vehicle) per 10,00,000 movements (X)	Average (U)	X-U	(X-U) ²	AL-1	AL-2	AL-3
January	240470	1	4.16	1.64	2.52	6.34	7.12	11.63	16.14
February	238078	0	0.00	1.64	-1.64	2.69	7.12	11.63	16.14
March	256269	0	0.00	1.64	-1.64	2.69	7.12	11.63	16.14
April	252647	0	0.00	1.64	-1.64	2.69	7.12	11.63	16.14
May	260504	3	11.52	1.64	9.88	97.54	7.12	11.63	16.14
June	243466	0	0.00	1.64	-1.64	2.69	7.12	11.63	16.14
July	245948	1	4.07	1.64	2.43	5.88	7.12	11.63	16.14
August	251663	0	0.00	1.64	-1.64	2.69	7.12	11.63	16.14
September	251536	0	0.00	1.64	-1.64	2.69	7.12	11.63	16.14
October	266168	0	0.00	1.64	-1.64	2.69	7.12	11.63	16.14
November	261684	0	0.00	1.64	-1.64	2.69	7.12	11.63	16.14
December	271251	0	0.00	1.64	-1.64	2.69	7.12	11.63	16.14
Total	3039684	5	1.64			133.97			

Standard Deviation =3.34



13.3 Safety Performance Target:

Average = 1.64	Target for 2024=1.33 Not Achieved	Target for 2025= 1.33
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The Average performance for the year 2024 has been 1.64 and Alert level-1 has been breached once in the month of May. As the target of **1.33** for year **2024** has not been achieved, it has been decided that the target for year **2025** shall be **1.33**

13.4 Alert Level:

Alert level setting

Alert Levels for the year 2025		
Alert Level -1	Alert Levels for the year 2025 are same as for year 2024	7.12
Alert Level -2		11.63
Alert Level -3		16.14

b) Alert Level Trigger

An alert (abnormal/ unacceptable trend) is indicated if any of the conditions below are met for current monitoring period (**2025**):

- **Any single point is above the Alert level 3 line**
- **2 consecutive points are above the Alert Level 2 line**
- **3 consecutive points are above the Alert Level 1 line**

When Alert is triggered (potential high risk or out of control situation), appropriate follow-up action is expected, such as further analysis to determine the source and root cause of the abnormal incident rate and any necessary action to address the unacceptable trend.

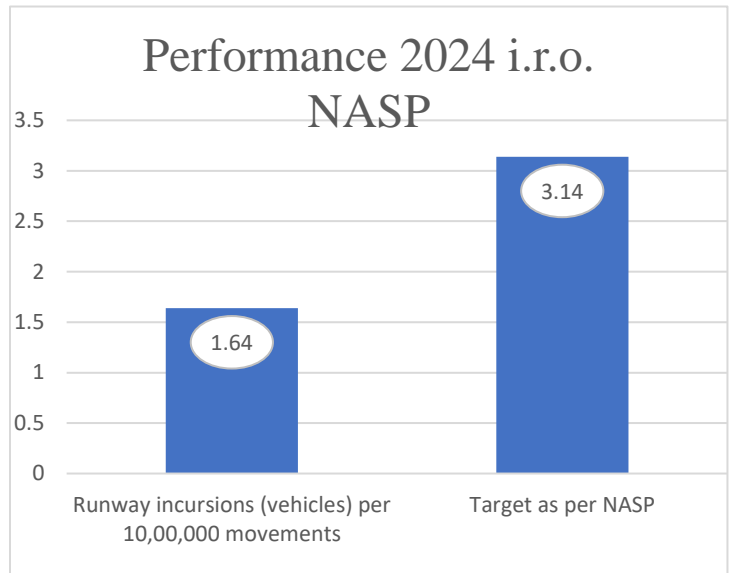
13.5 Target Achievement at the end of monitoring period (2025)

At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.

13.6 Comparison with National Aviation Safety Plan-

The average number runway incursions (vehicle) per 10,00,000 movements are less than the target set in NASP.

13.7 Safety Action Plan-



Safety Measures Already in Place

1. All runway incursions were examined and steps taken to minimize the incidents. ATS In-charges were instructed for follow-up actions as envisaged and appropriate to minimize the cause to prevent future incidents.
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Safety Action Plan

Safety objectives	Action
<p>Reduce the Number of runway incursions (vehicle) per 10,00,000 movements</p>	<ol style="list-style-type: none"> 1. All Runway Incursions will be examined for steps taken to minimize the incidents. 2. ATS In-charges will be advised, as appropriate for follow-up actions and measures to minimize the cause to prevent future incidents. 3. Regular meetings will be held with DGCA on the safety concerns arising out of the incidents and finalization of safety recommendations to prevent future incidents. 4. Corrective action plan will be implemented for the training of controllers and any systemic issues identified in the investigation of incidents. 5. Air Traffic Management Circulars (ATMCs) will be issued as appropriate to address safety concerns and introduction of new procedures in the ATS System. 6. Reporting of occurrences and incidents will be monitored through Airport Information Management System (AIMS). Controllers will be encouraged to report any safety issues without fear of punitive action. 7. Surface Movement Ground Control System, wherever installed will be used to improve situational awareness and reduce the risk of human error. 8. Yearly refresher training sessions will be conducted at all the stations on ATM procedures, prevention of runway incursions, ground infrastructure, taxi & parking procedure, operational procedure and situational awareness etc. 9. Yearly proficiency checks will be conducted for each controller for all the ratings held to assess their proficiency. 10. Instructors and Examiners will train the ATCOs and impart training as required, and carry out proficiency checks. 11. Safety workshops will be conducted at various stations on prevention of incidents, reporting of incidents, case studies, analysis of incidents for factual reporting and minimizing safety occurrences. 12. Half yearly VC meetings will be convened to share identified safety issues, causal factors with the Regional GM ATMs

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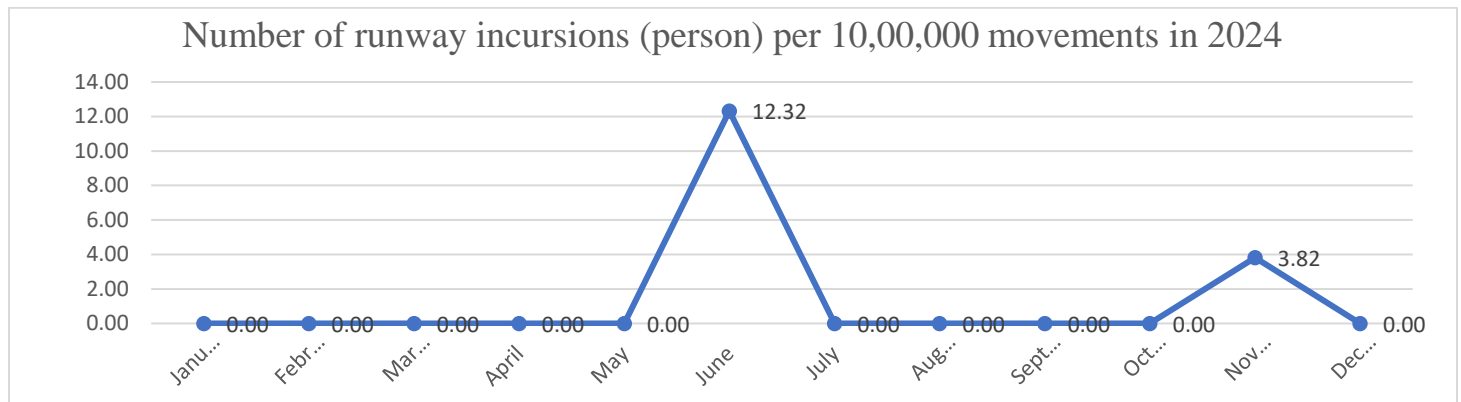
Number of runway incursions (person) per 10,00,000 movements

14.1.Scope:

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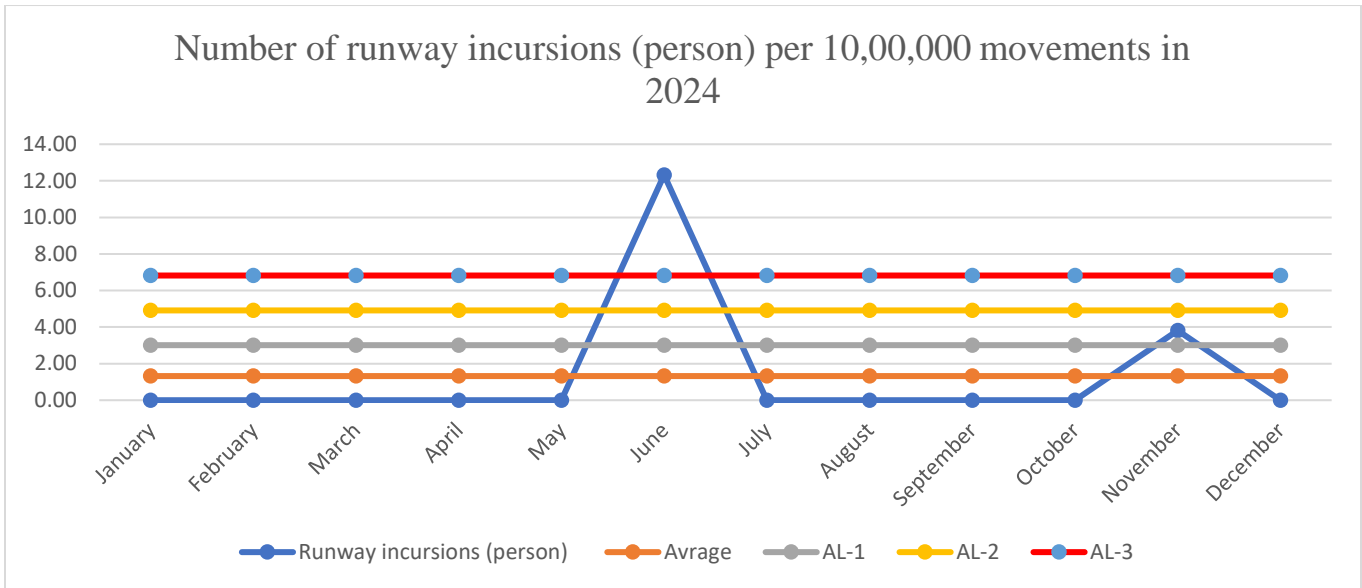
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Month	Total Aircraft Movement (Arrival + Departure)	Number of runway incursions (person)	Number of runway incursions (person) per 10,00,000 movements (X)	Average (U)	X-U	(X-U)^2	AL-1	AL-2	AL-3
January	240470	0	0.00	1.32	-1.32	1.74	3.01	4.91	6.82
February	238078	0	0.00	1.32	-1.32	1.74	3.01	4.91	6.82
March	256269	0	0.00	1.32	-1.32	1.74	3.01	4.91	6.82
April	252647	0	0.00	1.32	-1.32	1.74	3.01	4.91	6.82
May	260504	0	0.00	1.32	-1.32	1.74	3.01	4.91	6.82
June	243466	3	12.32	1.32	11.00	121.05	3.01	4.91	6.82
July	245948	0	0.00	1.32	-1.32	1.74	3.01	4.91	6.82
August	251663	0	0.00	1.32	-1.32	1.74	3.01	4.91	6.82
September	251536	0	0.00	1.32	-1.32	1.74	3.01	4.91	6.82
October	266168	0	0.00	1.32	-1.32	1.74	3.01	4.91	6.82
November	261684	1	3.82	1.32	2.50	6.26	3.01	4.91	6.82
December	271251	0	0.00	1.32	-1.32	1.74	3.01	4.91	6.82
Total	3039684	4	1.32			144.73			

Standard Deviation =3.47



14.3 Safety Performance Target:

Average = 1.32	Target for 2024=1.47 Achieved	Target for 2025= 1.43 (reduction of 3%)
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The Average performance for the year 2024 has been **1.32 which is below the set target** and Alert level-3 has been breached once in the month of June.

As the target of **1.47** for year **2024** has been achieved, it has been decided that the target for year **2025** shall be set as **1.43** with 3% reduction of the last year target.

14.4 Alert Level:

a) Alert level setting

Alert Levels for the year 2025			
Alert Level -1	AVG +1 SD =	1.32 +1(3.47) =	4.79
Alert Level -2	AVG +2 SD =	1.32 +2(3.47) =	8.26
Alert Level -3	AVG+ 3SD =	1.32 +3(3.47) =	11.73

b) Alert Level Trigger

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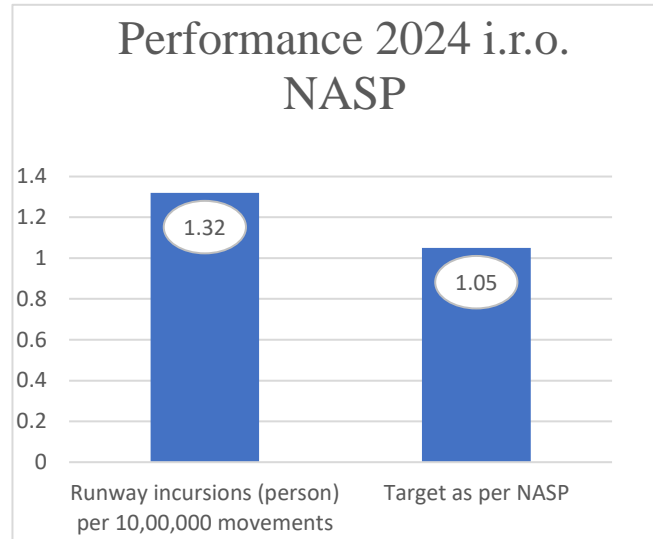
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At the end of the current year **2025**, if the average rate for the current year is equal to or less than the target set for the year, then the set target is deemed to have been achieved.

14.6 Comparison with National Aviation Safety Plan –

The average number of runway incursions (person) per 10,00,000 movements are more than the target set in NASP.



14.7 Safety Action Plan

Safety Measures Already in Place

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