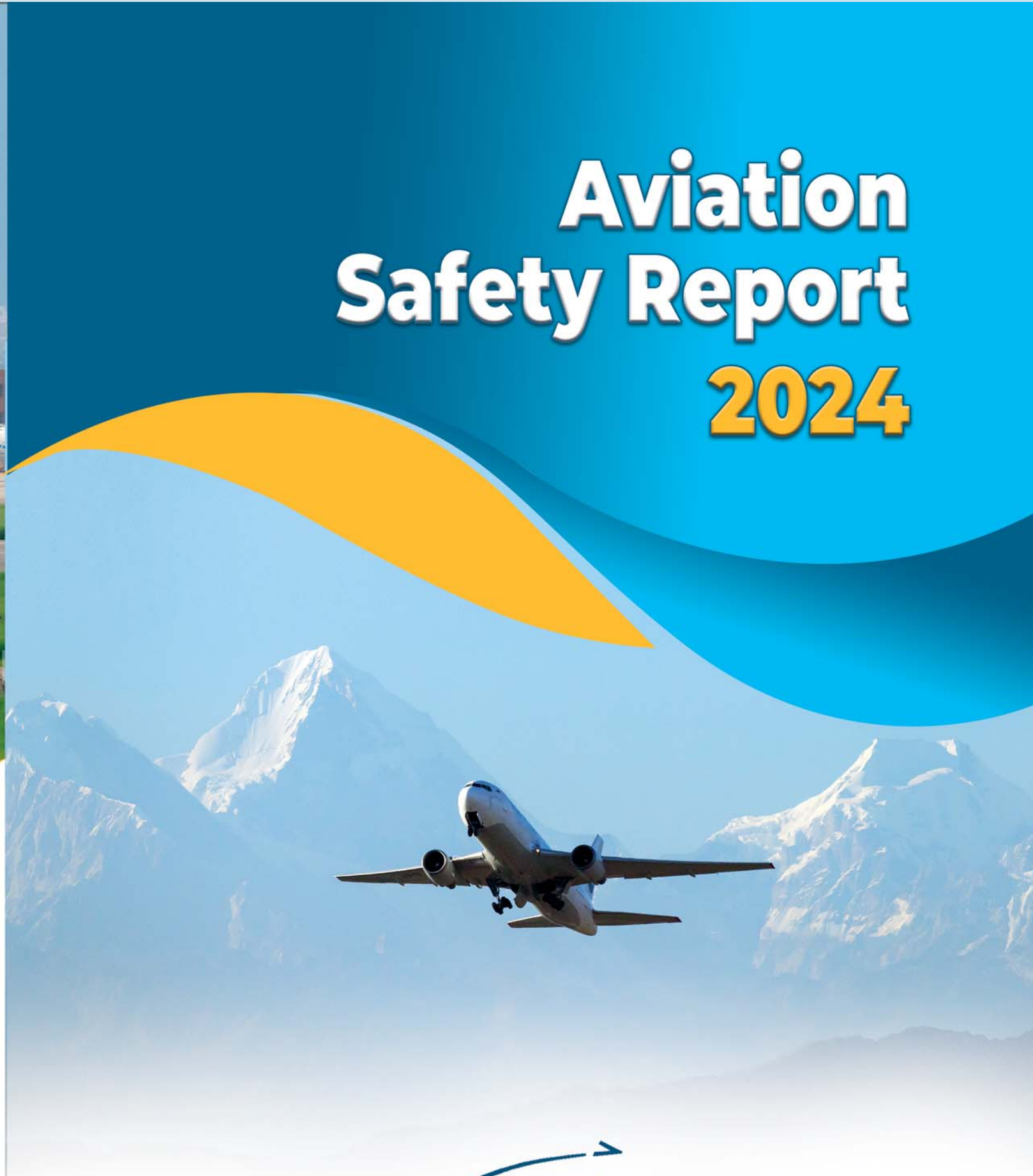
Aviation Safety Report 2024



Civil Aviation Authority of Nepal

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Note:

This report contains safety data of Nepali - registered Aeroplanes & Helicopters only.

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Photo Credit : ktm_spotter
Babur. Soti (Desh Nepal)
Madhu Sudan Thapa

Foreword

The prime objective of the establishment of Civil Aviation Authority of Nepal (CAAN) is to make the operation of national and international flights, air communication, air navigation and air transportation services safe, regular, standard and efficient.

Safety is the fundamental and foremost prioritized domain of aviation because there are lives involved in every operation of aircraft. The 193 countries including Nepal, who cooperate through ICAO, are currently working toward their agreed global safety target of zero fatalities by 2030 along with the strengthening of their regulatory capacities, while pursuing a range of programmes and targets relevant to current core areas of global aviation safety planning, oversight and risk mitigation.

CAAN is publishing the Aviation Safety Report annually in order to support the safety objectives. This edition of Aviation Safety Report (ASR) is an endeavor to promote safety through sharing of state safety information. It also reflects the level of CAAN's priority on safety promotion and enhancement.

This Safety Report, 2024 is the eighth edition of the Aviation Safety Report that started being published from 2016. It provides a summary on safety activities, initiatives and updates on safety indicators, reactive and proactive safety information, safety promotional activities and the progress on implementation of Nepal Aviation Safety Plan (NASP) 2023-2025. It is based on Safety data (mandatory and voluntary) collected by state and operators, ICAO USOAP Audit Reports, and Accident Investigation Reports conducted by MoCTCA. It also depicts Nepal's status in latest USOAP Audit as well as in the field of SSP implementation.

I hope this report will successfully serve the purpose of its publication and play an important part in inculcating safety culture in the aviation stakeholders of Nepal.

Er. Pradeep Adhikari
Director General

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EXECUTIVE SUMMARY

Currently, in Nepal, there are 5 International aeroplane operators, 9 domestic aeroplane operators and 12 helicopter operators are operating with scheduled and chartered services. With the limitations regarding types of aircraft to be operated in most of the STOL airfields subjected to manoeuvring restrictions, the operations in different regions of Nepal pose different levels of complexity. Moreover, helicopter operations are almost inevitable and hence frequent in remote sector owing to the demand of rescue and relief flights. These specific conditions prevalent in Nepal have resulted in quite a heterogeneous fleet operating in the airspace of Nepal.

The trend of aircraft accident (per 1,000 flying hours) and fatality has shown slight increment compared to previous years statistics.

Still the CFIT is the main risk category in Nepal because according to the last 10 years aircraft accident statistics CFIT has accounted 58.5% of total fatality of the period. Similarly, approach has been the most dangerous phase of flight.

Occurrence reporting is one of the sources of reactive safety information. 579 occurrences were reported in 2023 against 513 in 2022. Studying the type of occurrences based on their severity, four accident has occurred in the year 2023. 21 serious incidents and 554 incidents, were registered in 2023. Considering the data derived from occurrence reporting in 2023, based on the number and severity of the occurrences, the significant risk areas of Nepal are CFIT, LOC-I, CTOL, RAMP, ARC, MAC, CABIN, NAV, GCOL, SCF-NP, BIRD and SCF-PP. Similarly, the top risky phases of flight are En-route, Take Off, Landing, Approach, Standing and Initial-climb.

Similarly, there has been a progressive development regarding the proactive source of information especially in the area of voluntary information reporting. The approaches such as introduction of SMS audits, vigorous safety promotion and collaboration with stakeholders in SMS matters have played a significant role in spreading awareness in a deeper way. As a result, 1688 hazards have been reported in the year 2023.

First 5 -years safety plan of Nepal was developed in 2018 in congruence with the Global Aviation Safety Plan, and Regional Aviation Safety Plan (RASP). Now, Nepal has developed the national safety plan (2023-2025) and is being implemented. The plan has identified seven areas of operational safety risk, viz. Controlled Flight into Terrain (CFIT), Loss of Control in Flight (LOC-I), Mid Air Collision (MAC), Runway Incursion (RI), Runway Excursion (RE) and Wild

life Strike (WS) and Abnormal Runway Contact (ARC). CAAN is continuously monitoring the implementation of NASP's SEIs and associated actions to make sure that the actions are done within the deadlines.

The Effective Implementation of Nepal in the last USOAP audit (April 2022) is 70.10 %. Nepal has made a significant progress in its oversight capability since the initial audit in 2009.

Nepal has started to implement State Safety Programme for effective state safety management. Now, Nepal has completed 92.9% of Level 3 of SSP implementation (SSP implementation as depicted by ICAO iSTARs State Safety briefing App.).

CAAN is tracking the implementation status of accident investigation recommendations of Government of Nepal directed to different entities since 2008 and publishing the last 10 years status in the report. The implementation status of last 10 years (2014 to 2023) has been tracked to be 85% - fully compliant, 5%- partially complaint and 10% - non-compliant.

During 2023, CAAN has performed various activities for the enhancement of safety and inculcation of safety culture among all. Various promotional activities were carried out by CAAN and some in collaboration with aviation stakeholders.

Chapter 1

Aircraft Operations in Nepal

Air Transport Management in Nepal largely depends upon its geography and meteorological conditions. With the limitations regarding types of aircraft to be operated in most of the STOL airfields subjected to manoeuvring restrictions especially due to the high terrain with rug mountains, the operations in different regions of Nepal pose different levels of complexity.

As of date of publication of this report, total 22 airline operators are into operation with 10 of them operating fixed wing aircrafts, 12 operating rotor wing aircraft. Out of 22 operators, 1 is operating a mixed fleet of fixed wing and rotor wing aircrafts. Helicopter operators in Nepal are involved in chartered as well as rescue and relief flights. Of the 10 fixed wing operators, 1 is an exclusive international operator, 3 are into both domestic and international operators, and the remaining are involved in domestic operations.

Aircraft Operations in Nepal

International (5)

- Nepal Airlines Corp.
- Himalaya Airline
- Buddha Air
- Shree Airlines (chartered only)
- Yeti Airlines (chartered only)

Helicopters (12)

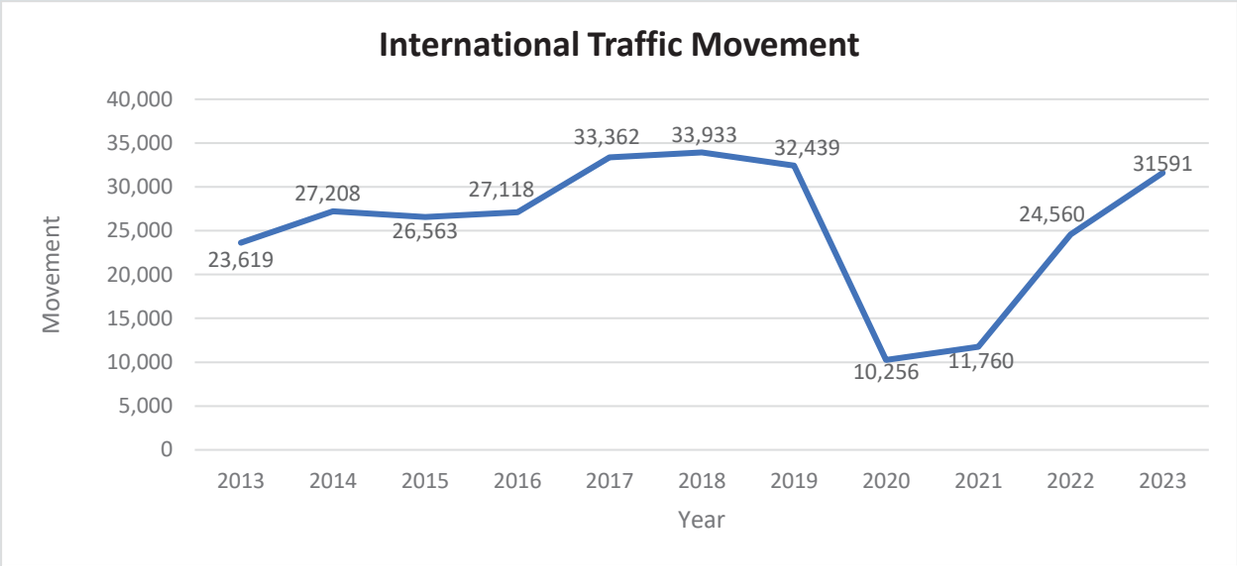
- Air Dynasty Heli
- Altitude Air
- Annapurna Helicopters
- Fishtail Air
- Heli Everest
- Kailash Helicopters
- Manang Air
- Mountain Helicopters
- Mustang Helicopters
- Prabhu Helicopters
- Shree Airlines
- Simrik Air

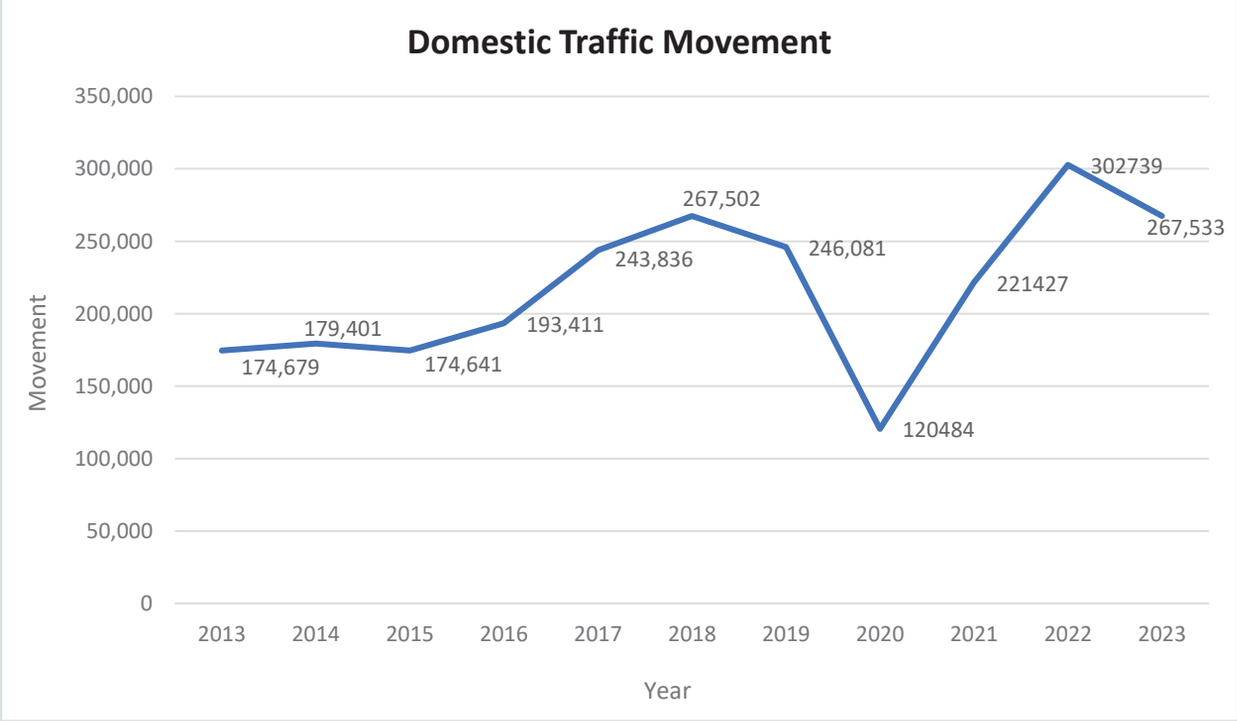
Domestic (9)

- Buddha Air
- Guna Airlines
- Nepal Airlines Corp.
- Saurya Airlines
- Shree Airlines
- Sita Air
- Summit Air
- Tara Air
- Yeti Airlines

Chapter 2

Air Traffic Movement in Nepal (2014 to 2023)

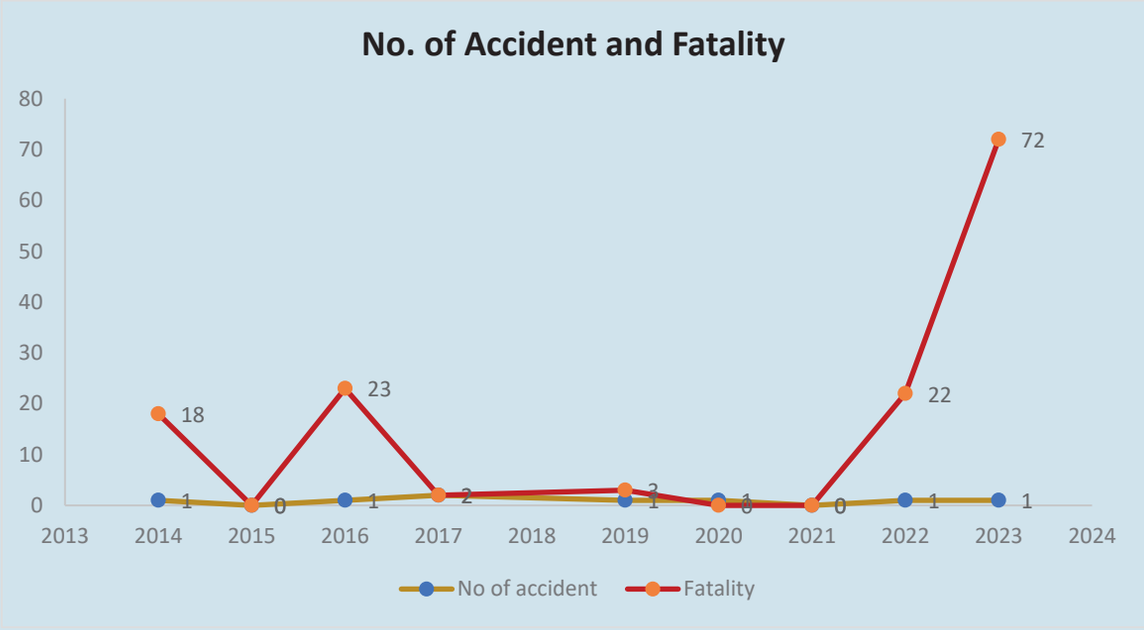


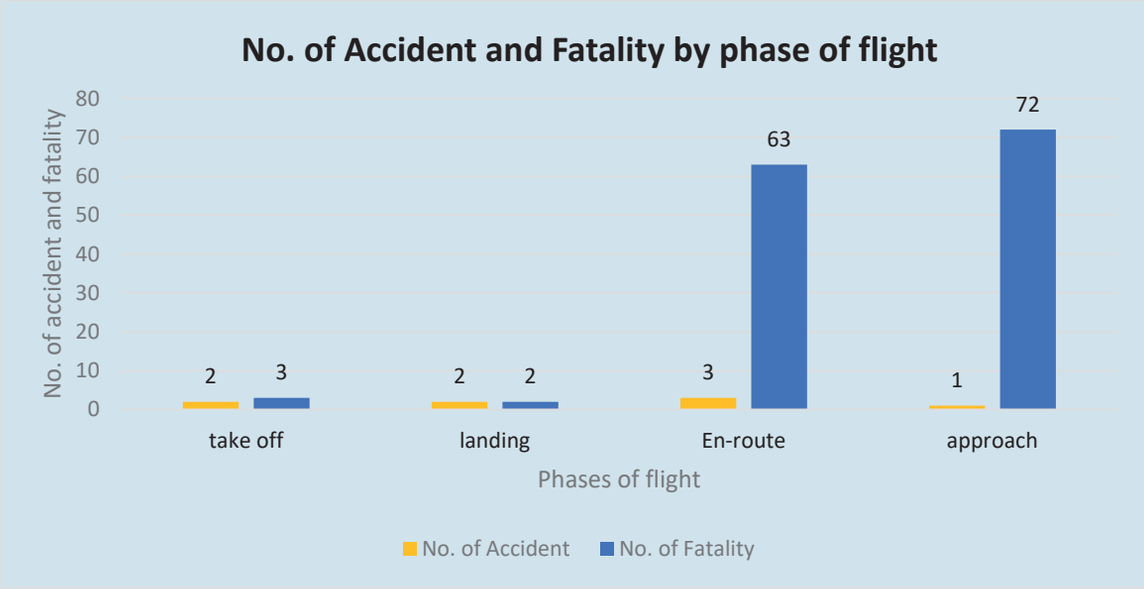


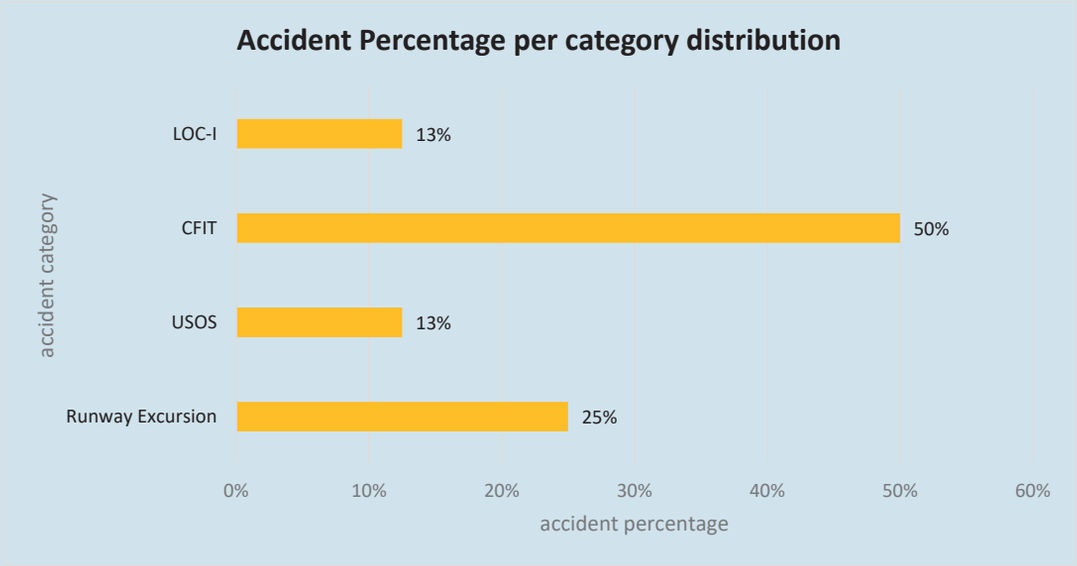
Chapter 3

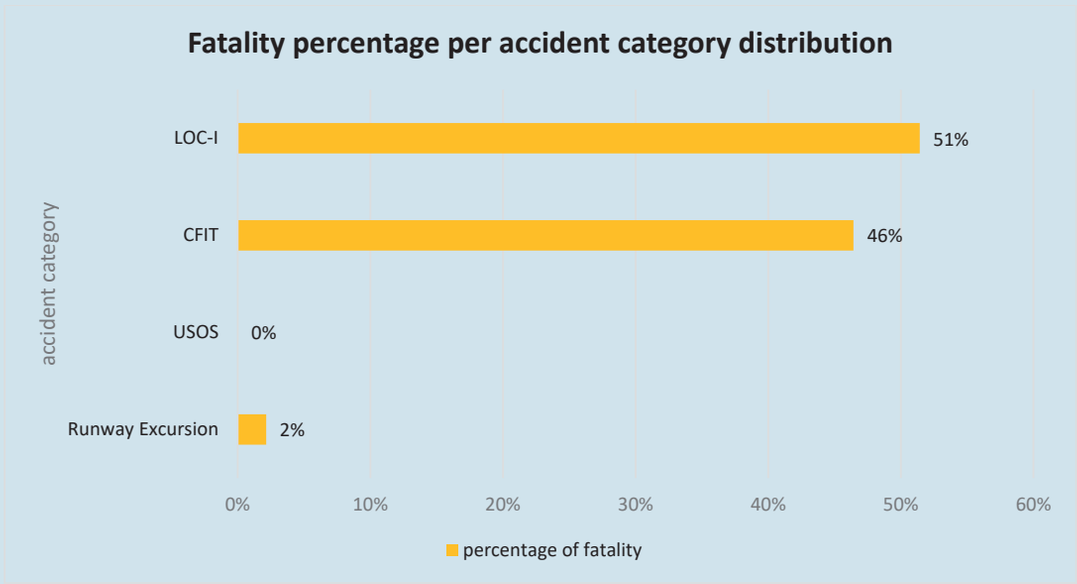
Aircraft Accident in Nepal (2014 to 2023)

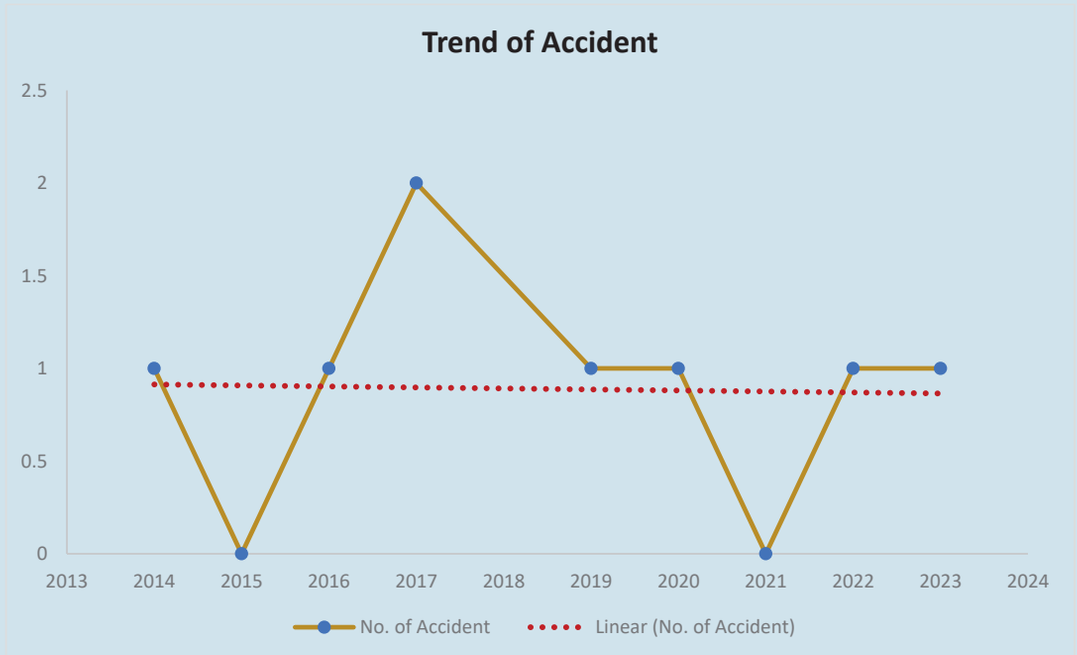
A. Aeroplane accident in Nepal (2014-2023)

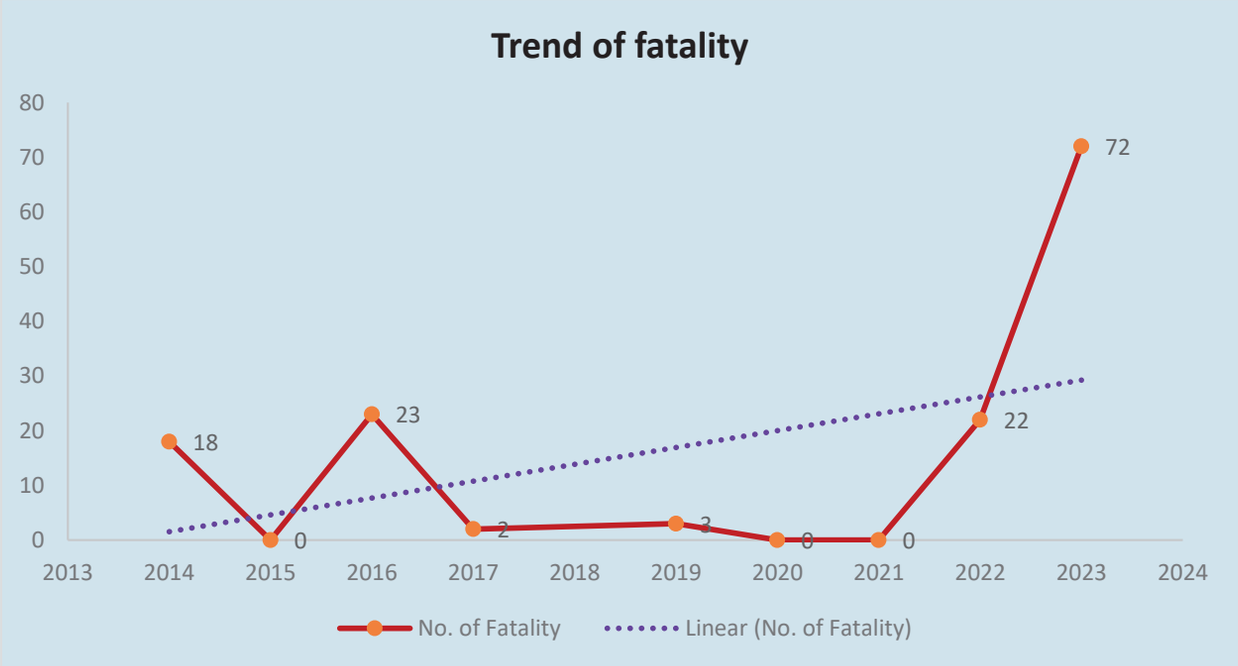


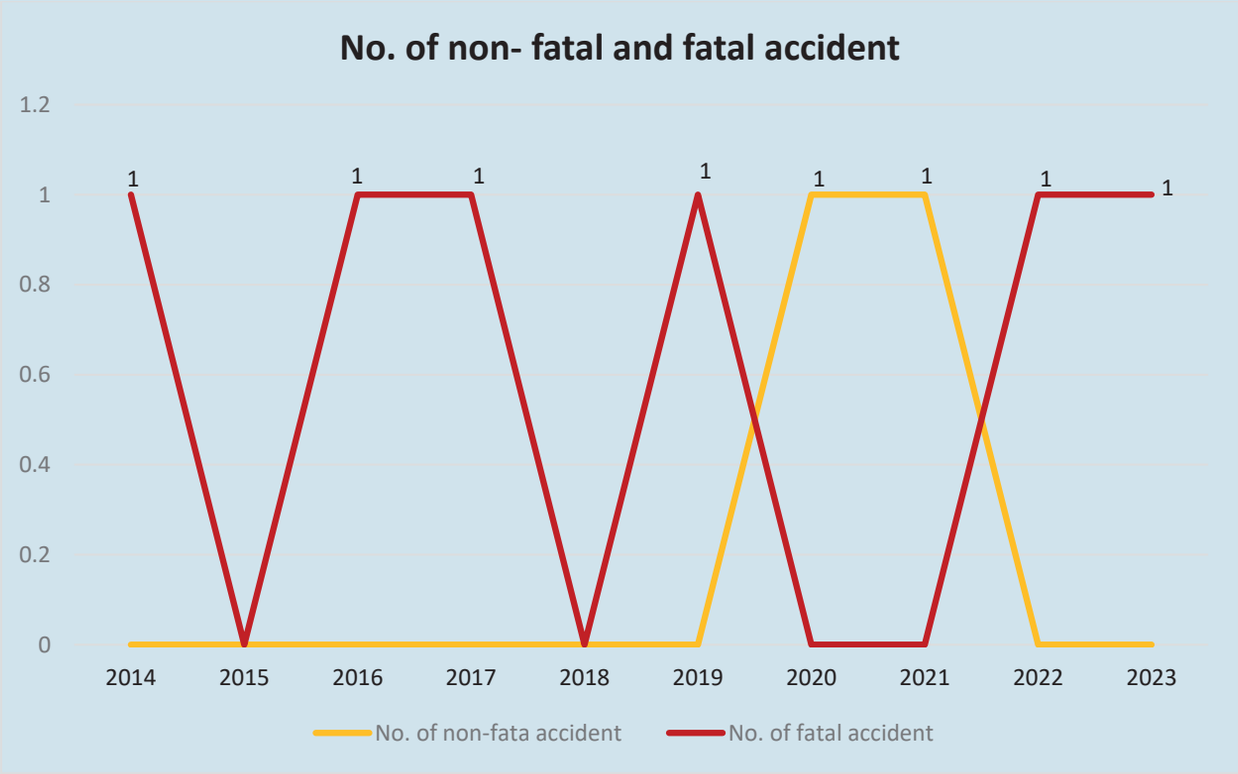



Accident Percentage per category distribution
LOC-I
13%
CFIT
50%
USOS
13%
Runway Excursion
25%
accident category
0%
10%
20%
30%
40%
50%
60%
accident percentage

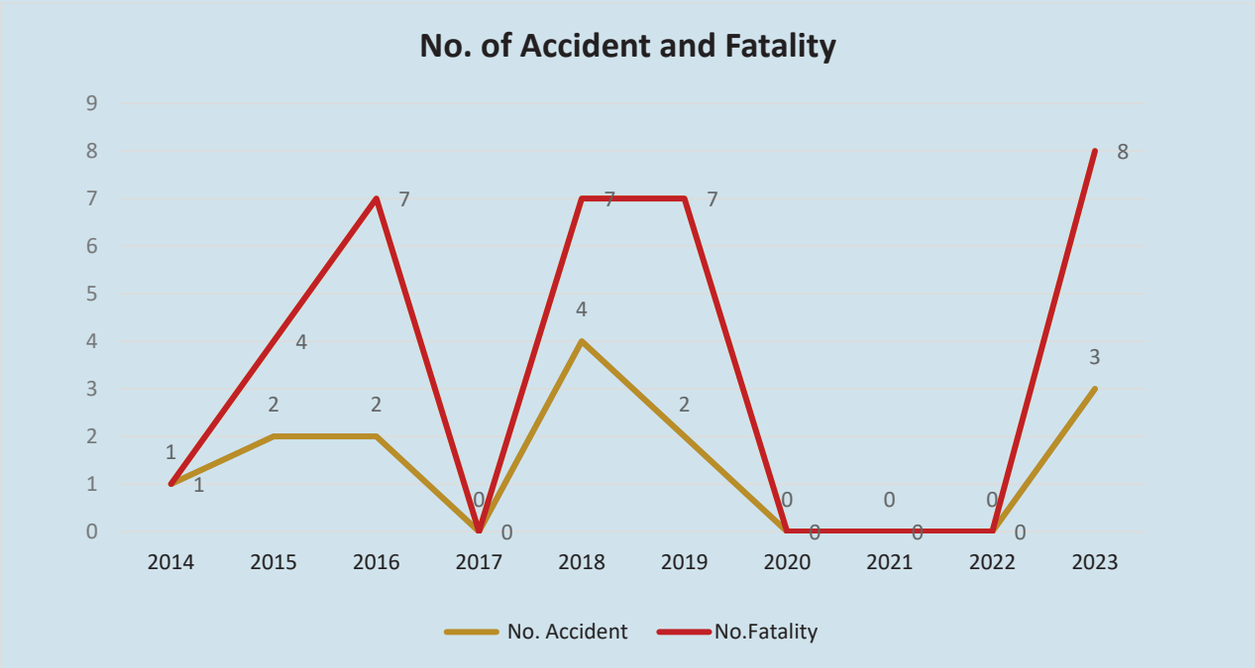

Fatality percentage per accident category distribution
LOC-I
51%
CFIT
46%
USOS
0%
Runway Excursion
2%
accident category
0%
10%
20%
30%
40%
50%
60%
percentage of fatality

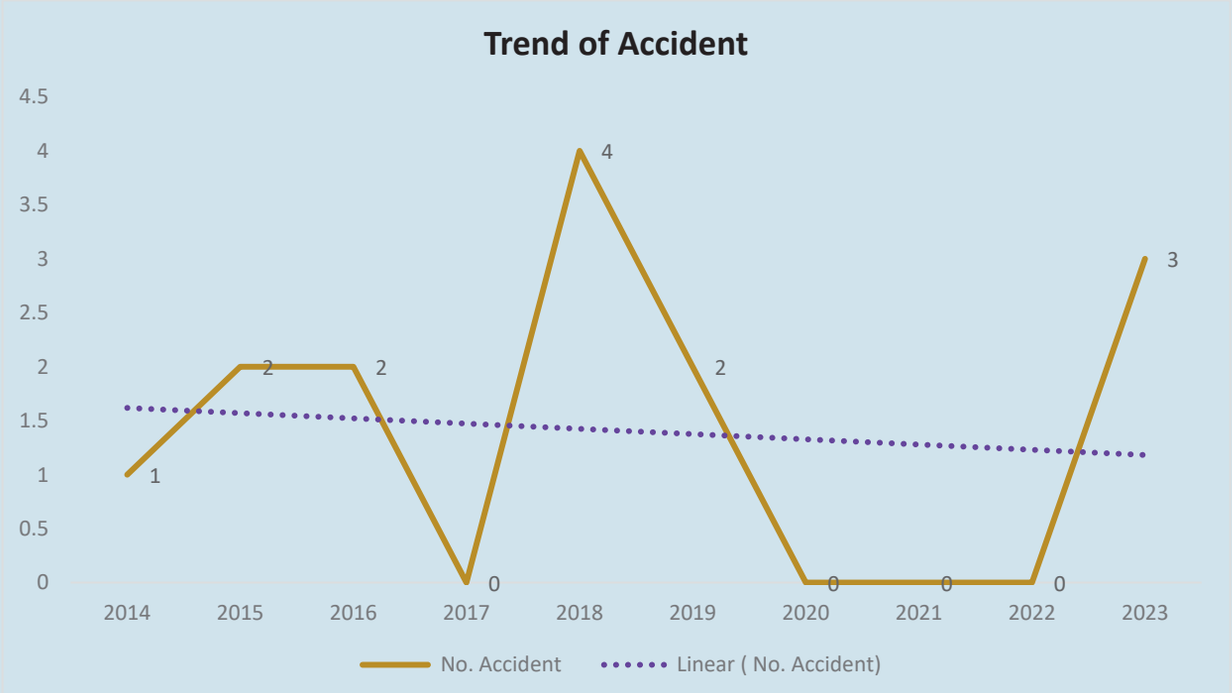

Trend of Accident
2.5
2
1.5
1
0.5
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
No. of Accident
Linear (No. of Accident)

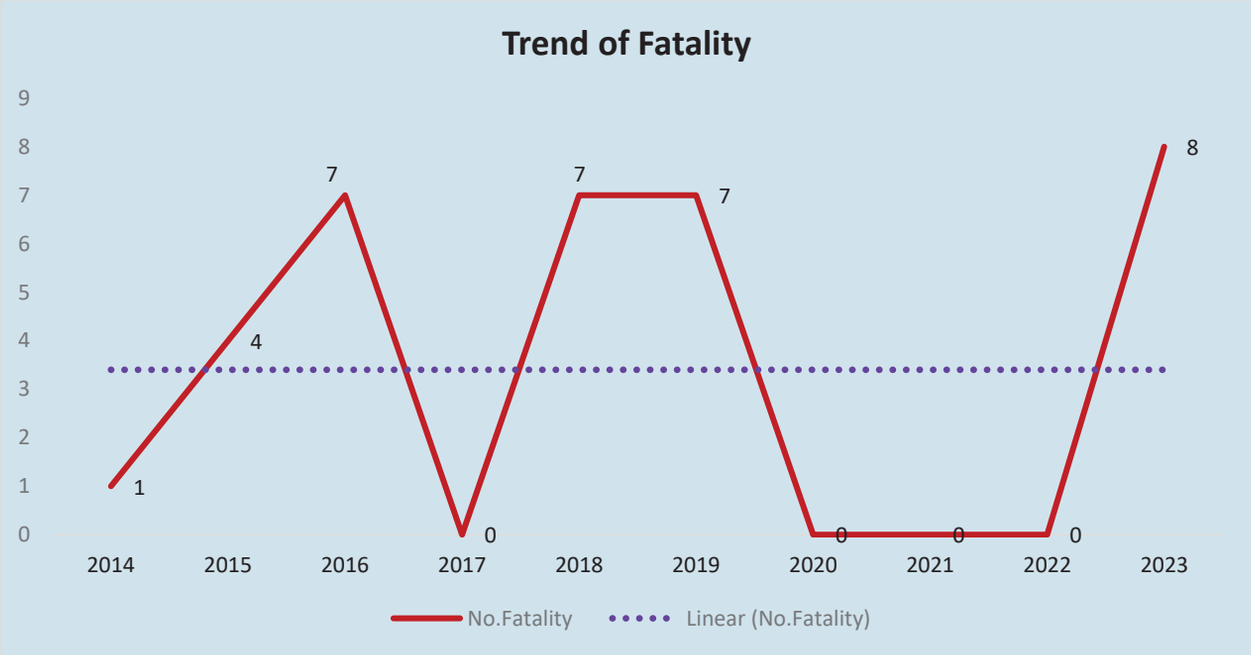

Trend of fatality
80
70
60
50
40
30
20
10
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
18
0
23
2
3
0
0
22
72
No. of Fatality
Linear (No. of Fatality)

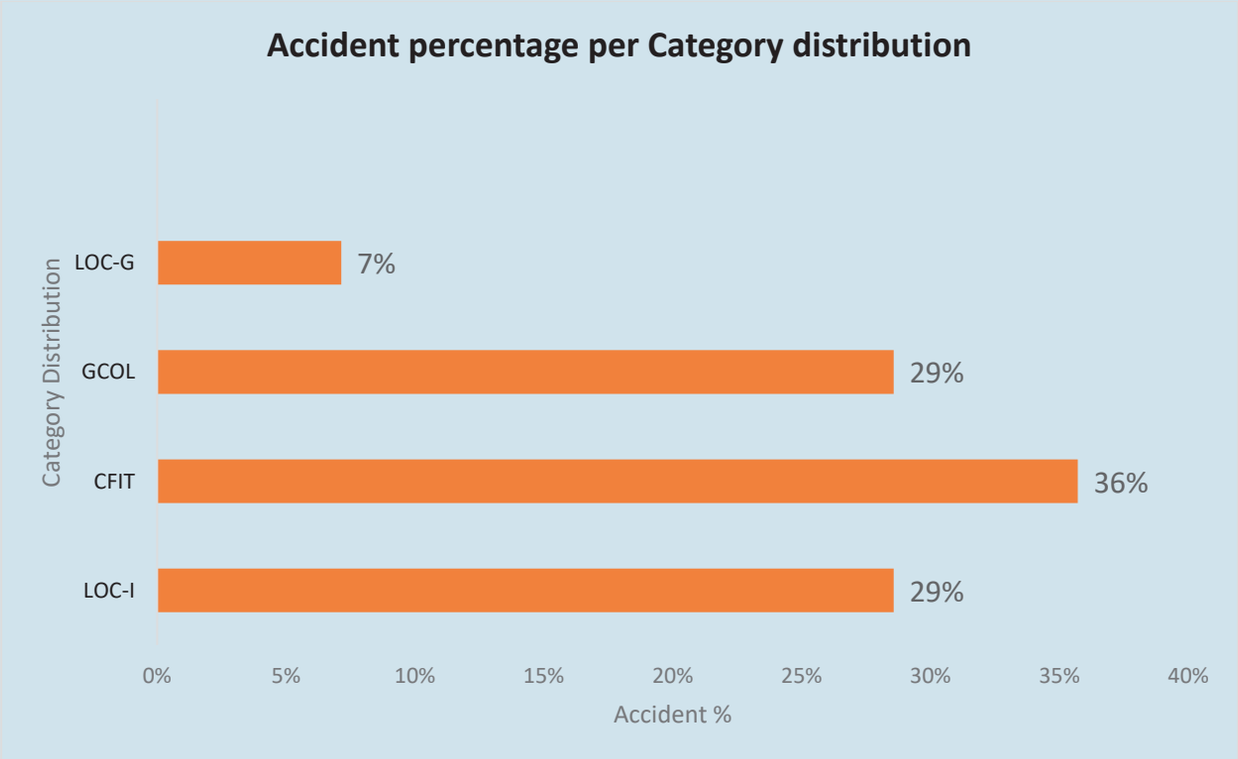

No. of non- fatal and fatal accident
1.2
1
0.8
0.6
0.4
0.2
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
1
1
1
1
1
1
1
1
1
No. of non-fata accident
No. of fatal accident

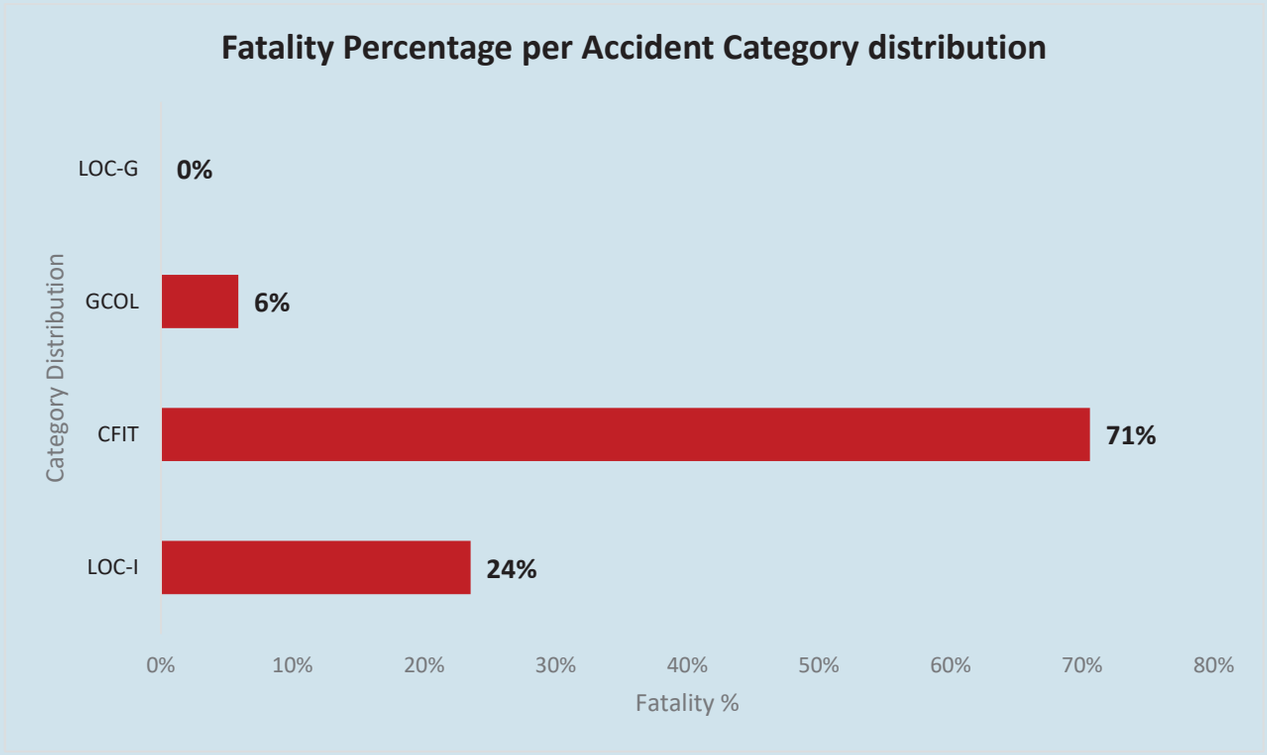
B. Helicopter Accident in Nepal (2014-2023)

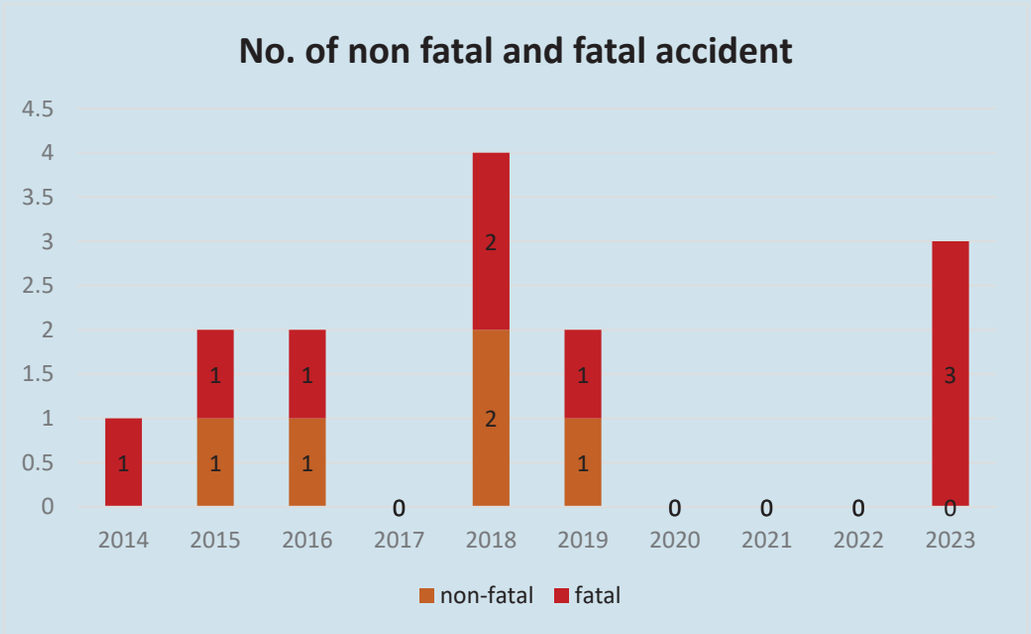





Trend of Fatality
9
8
7
6
5
4
3
2
1
0
1
4
7
0
7
7
0
0
0
8
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
No.Fatality
Linear (No.Fatality)


Accident percentage per Category distribution
Category Distribution
LOC-G
GCOL
CFIT
LOC-I
7%
29%
36%
29%
0%
5%
10%
15%
20%
25%
30%
35%
40%
Accident %


Fatality Percentage per Accident Category distribution
LOC-G
0%
GCOL
6%
CFIT
71%
LOC-I
24%
Category Distribution
0%
10%
20%
30%
40%
50%
60%
70%
80%
Fatality %


No. of non fatal and fatal accident
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
non-fatal
fatal

Chapter 4

State Significant Safety Risks for 2024

Current Risks

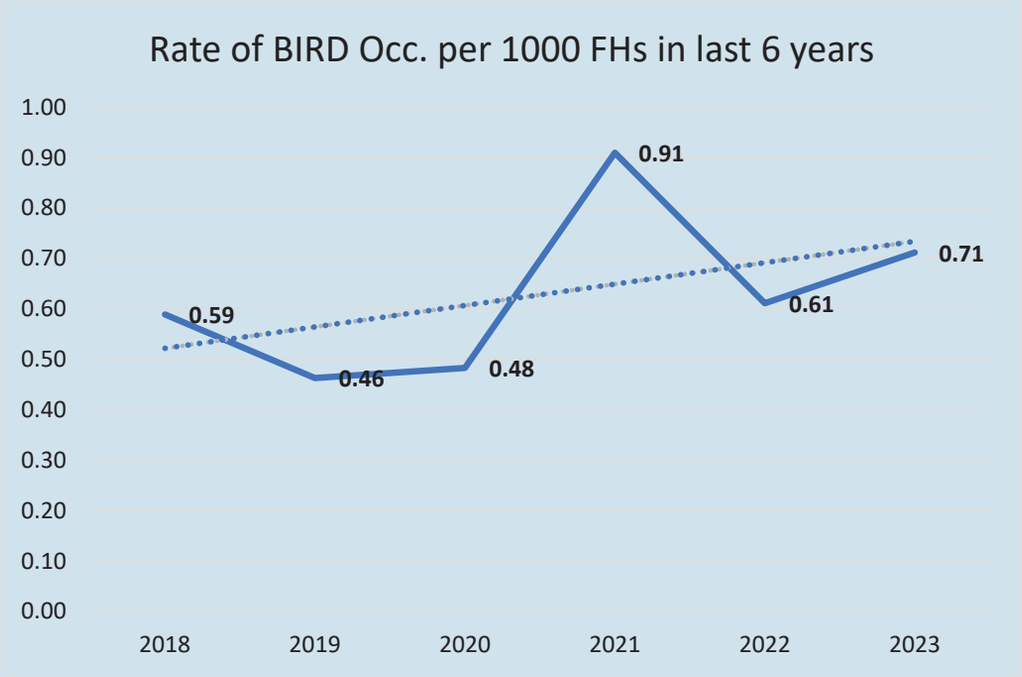
Considering the occurrences reported in 2023, State has identified top seven Significant risks (not in specific order), top four risky phase of flight (not in specific order) and top 8 risky months in Nepal.

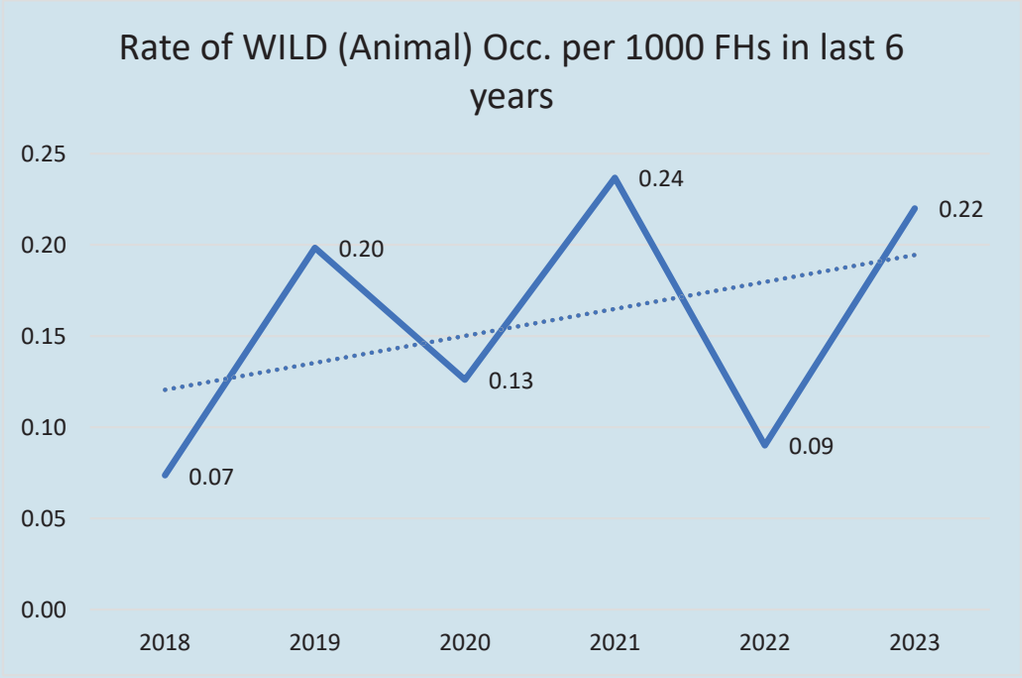
The occurrence categories are in line with the occurrence categories defined in CAST/ICAO Common Taxonomy Team document, 2021.

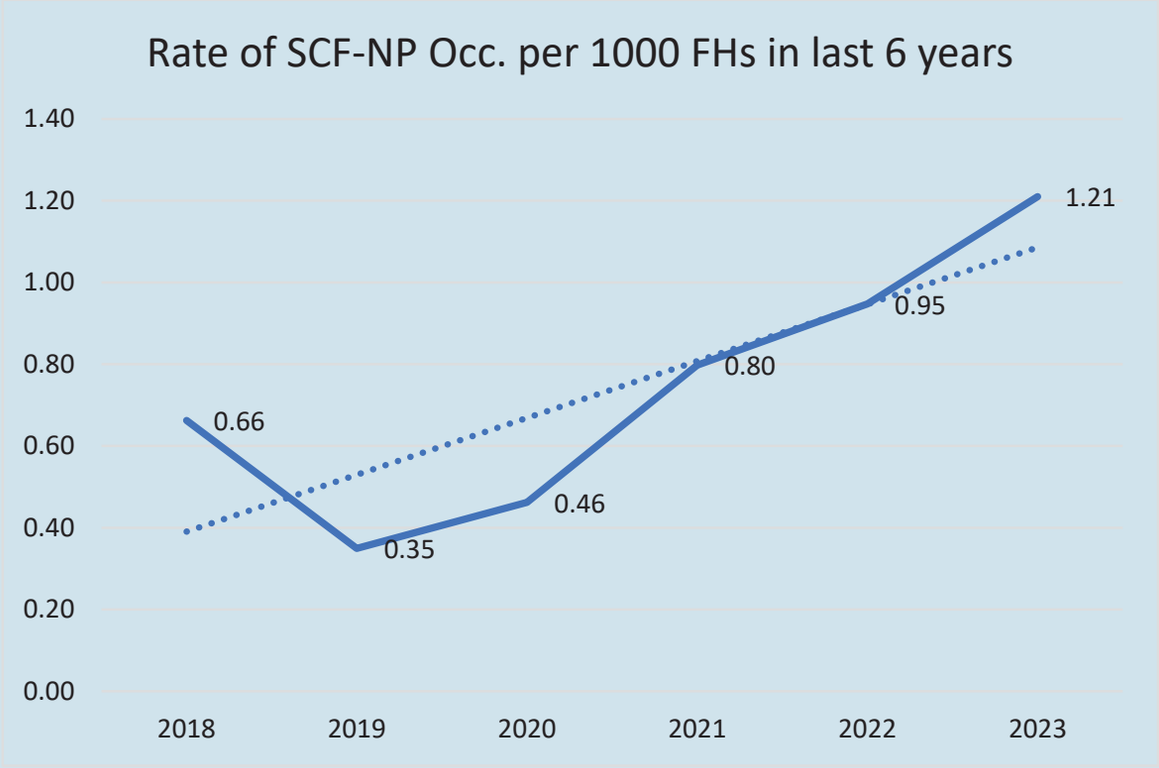
Future Risks

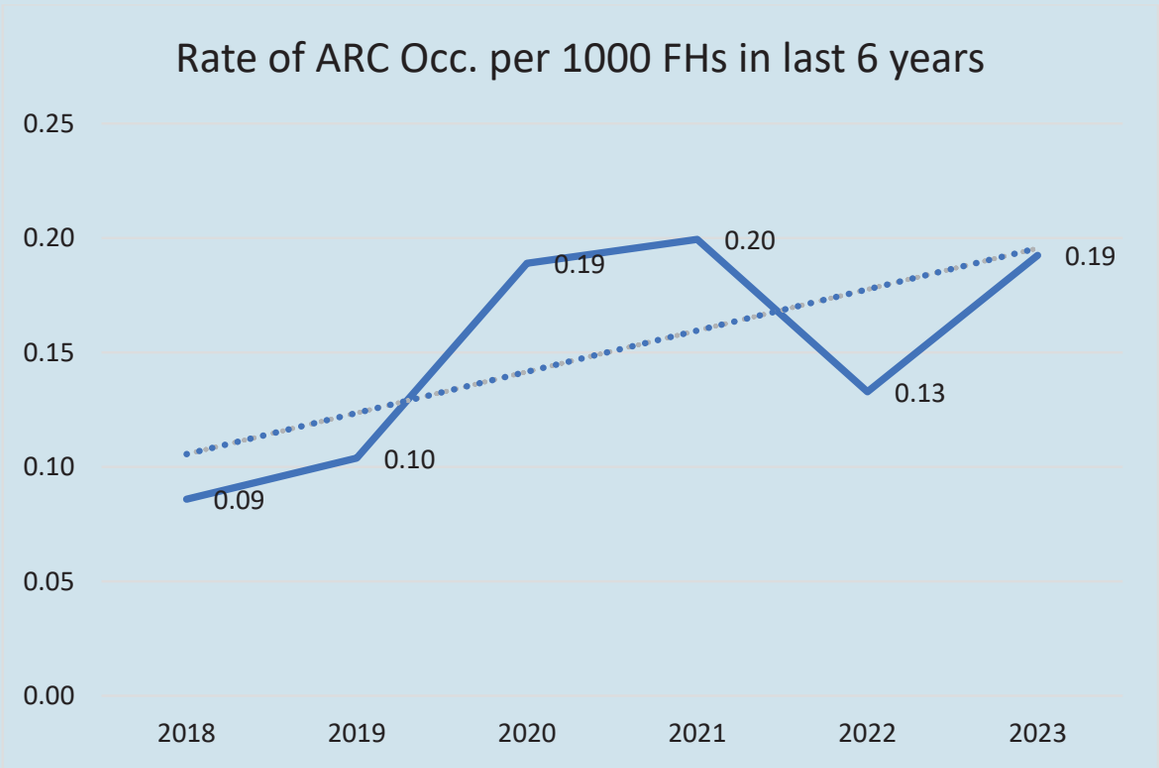
Considering the hazards reported in 2023, State has identified top fifteen Significant safety risks (not in specific order) for the future.

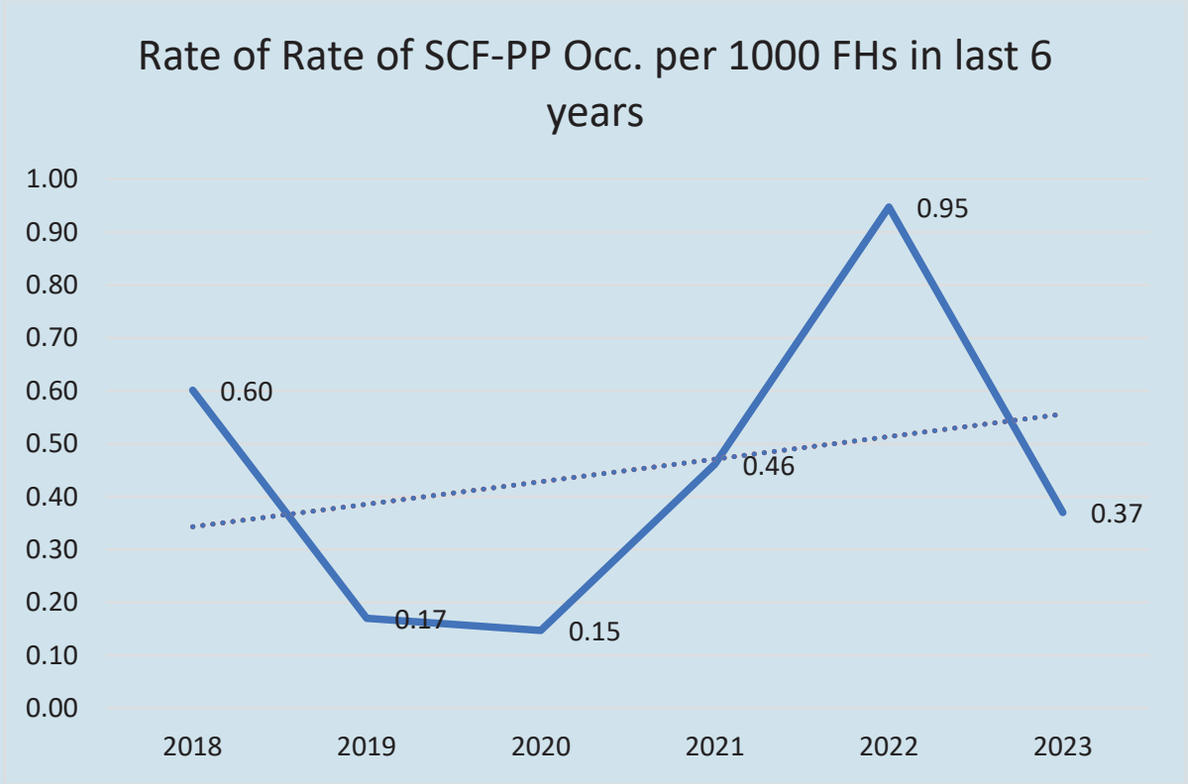
Last 6 - years (2018, 2019, 2020, 2021, 2022, 2023) trend analysis of rate of occurrence of State Significant Safety Risks

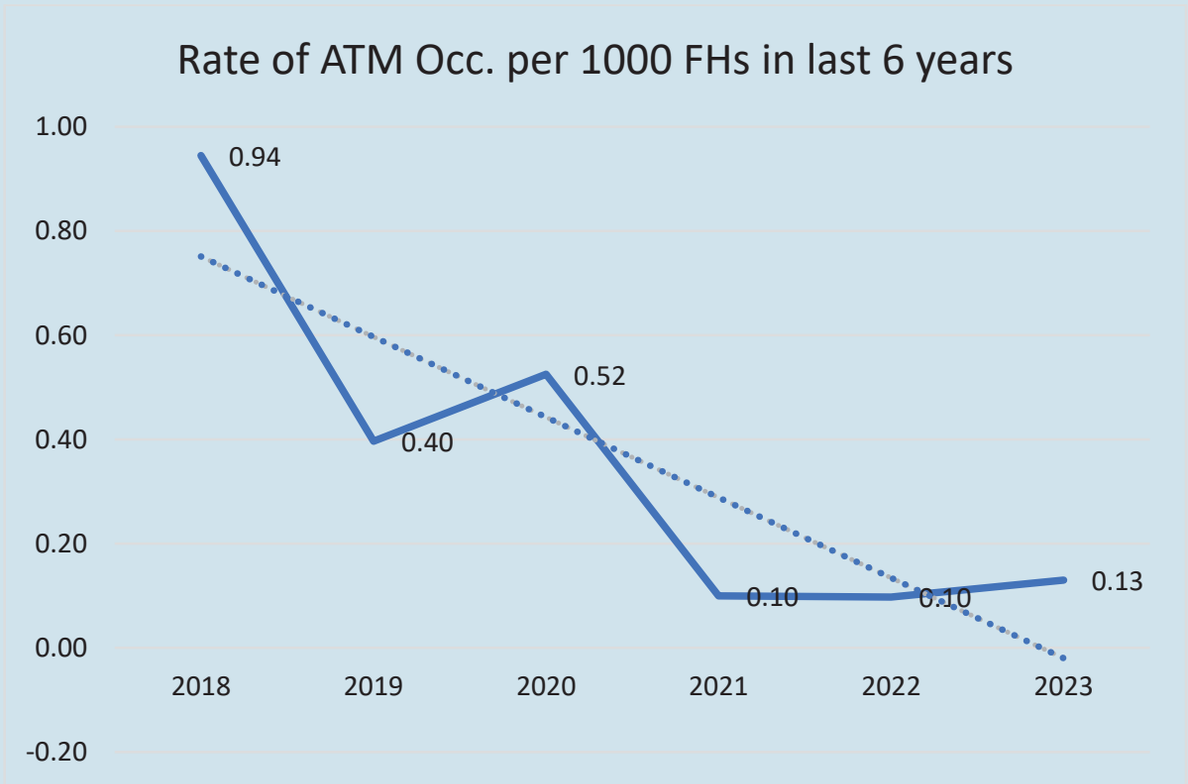


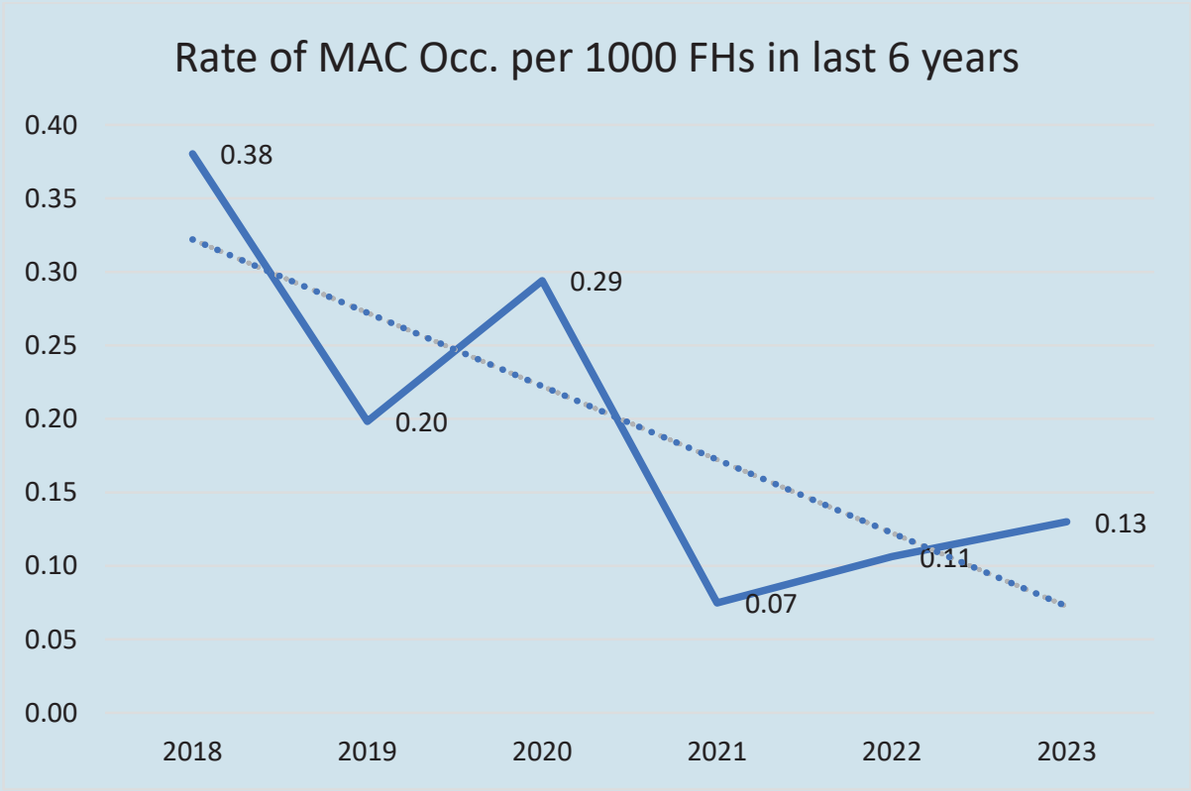


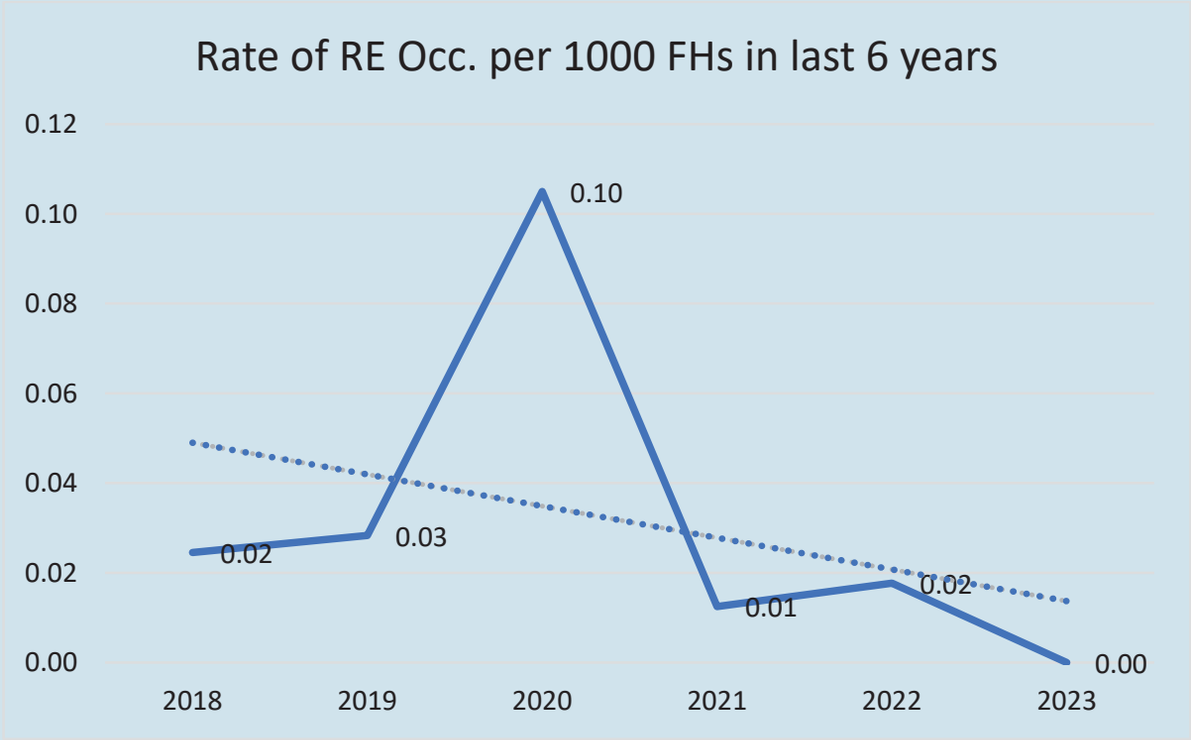

Rate of SCF-NP Occ. per 1000 FHs in last 6 years
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.66
0.35
0.46
0.80
0.95
1.21
2018
2019
2020
2021
2022
2023

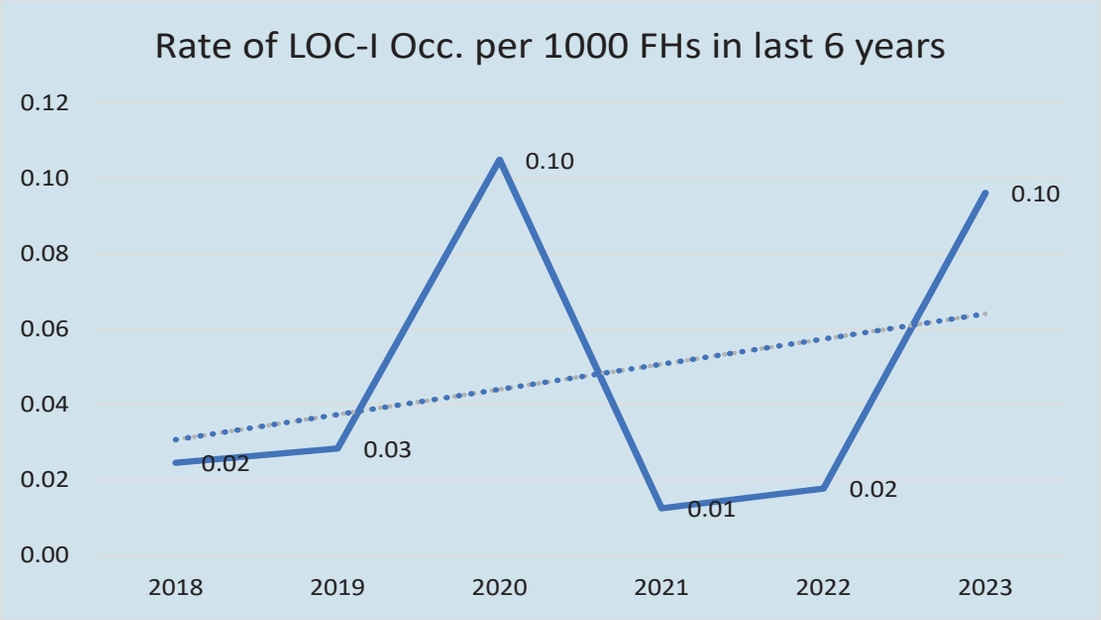

Rate of ARC Occ. per 1000 FHs in last 6 years
0.25
0.20
0.15
0.10
0.05
0.00
0.09
0.10
0.19
0.20
0.13
0.19
2018
2019
2020
2021
2022
2023

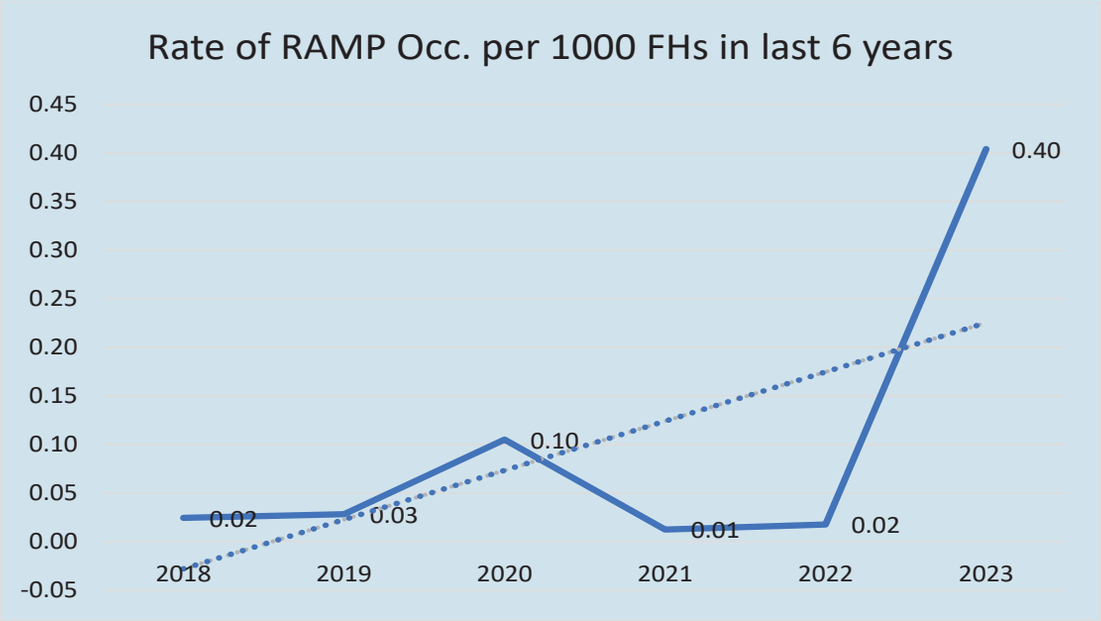

Rate of Rate of SCF-PP Occ. per 1000 FHs in last 6 years
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.60
0.17
0.15
0.46
0.95
0.37
2018
2019
2020
2021
2022
2023

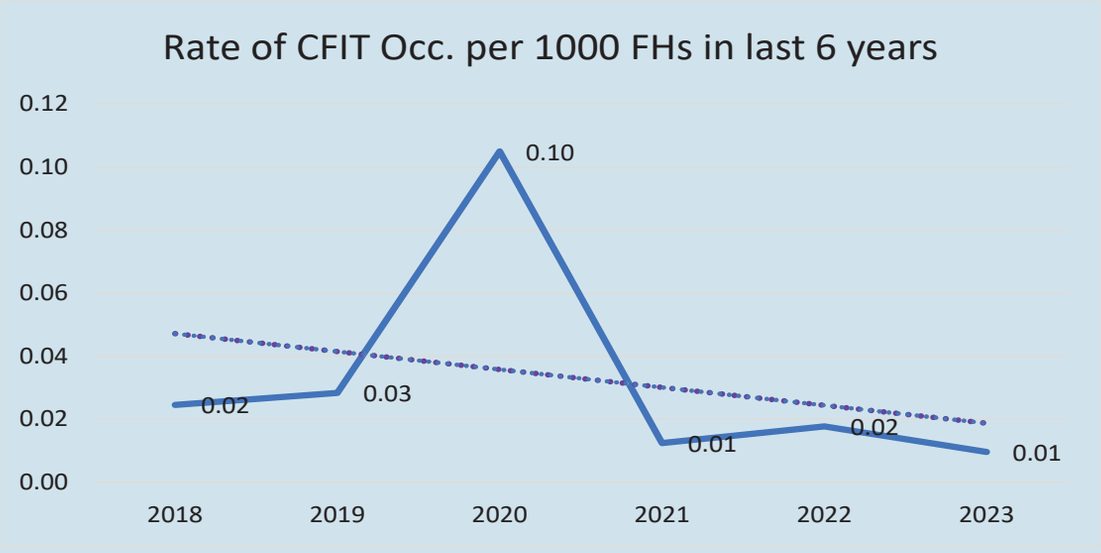

Rate of ATM Occ. per 1000 FHs in last 6 years
1.00
0.80
0.60
0.40
0.20
0.00
-0.20
0.94
0.40
0.52
0.10
0.10
0.13
2018
2019
2020
2021
2022
2023


Rate of MAC Occ. per 1000 FHs in last 6 years
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.38
0.20
0.29
0.07
0.11
0.13
2018
2019
2020
2021
2022
2023


Rate of RE Occ. per 1000 FHs in last 6 years
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0.02
0.03
0.10
0.01
0.02
0.00
2018
2019
2020
2021
2022
2023

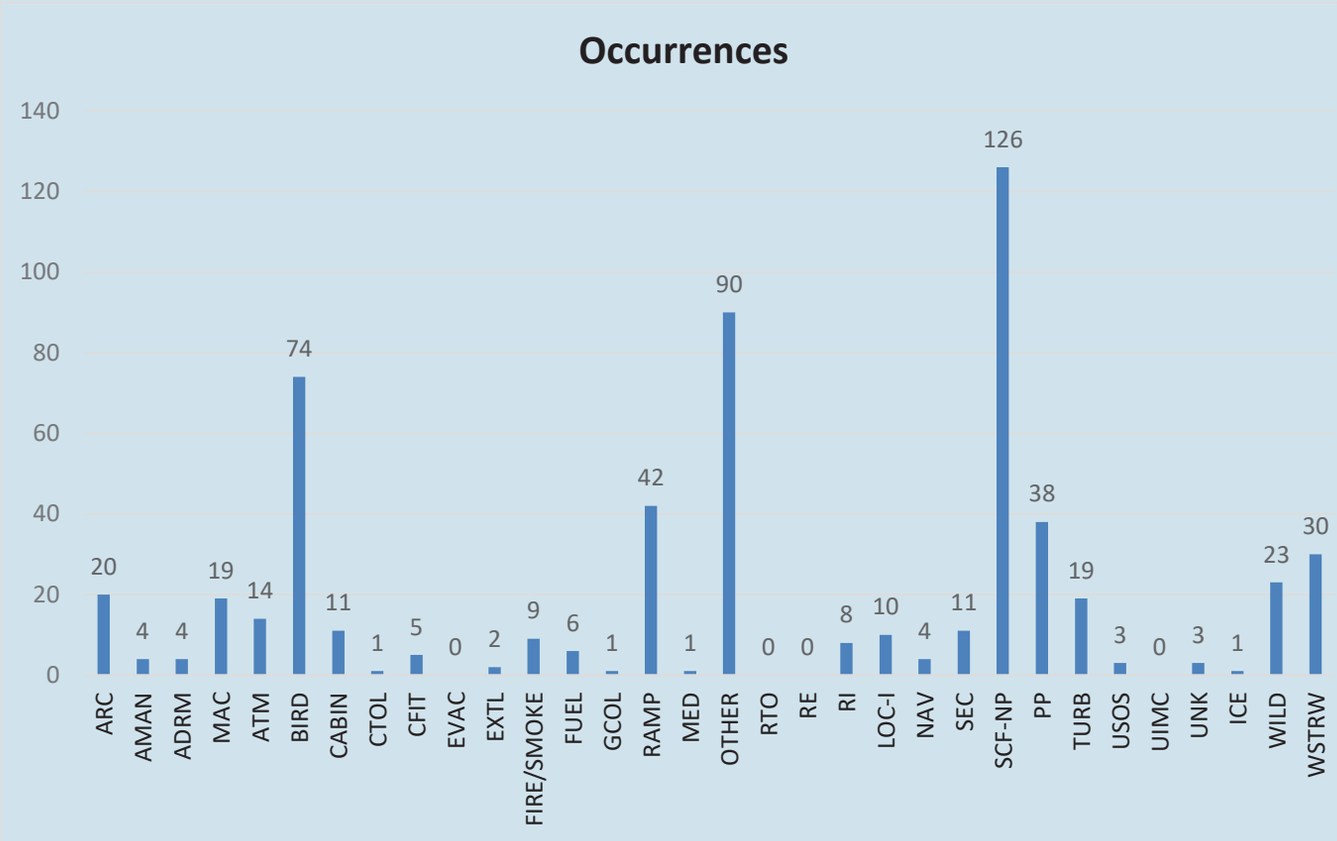

Rate of LOC-I Occ. per 1000 FHs in last 6 years
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0.02
0.03
0.10
0.01
0.02
0.10
2018
2019
2020
2021
2022
2023


Rate of RAMP Occ. per 1000 FHs in last 6 years
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
-0.05
0.02
0.03
0.10
0.01
0.02
0.40
2018
2019
2020
2021
2022
2023


Rate of CFIT Occ. per 1000 FHs in last 6 years
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0.02
0.03
0.10
0.01
0.02
0.01
2018
2019
2020
2021
2022
2023

Chapter 5

Occurrence Reporting in 2023



Total number of occurrences reported in 2023 were 579 against the 513 in 2022.

The 90 occurrences fallen in category "OTHER" are not directly related to any category defined in the CAST/ICAO Common Taxonomy Team (CICTT) Taxonomy.

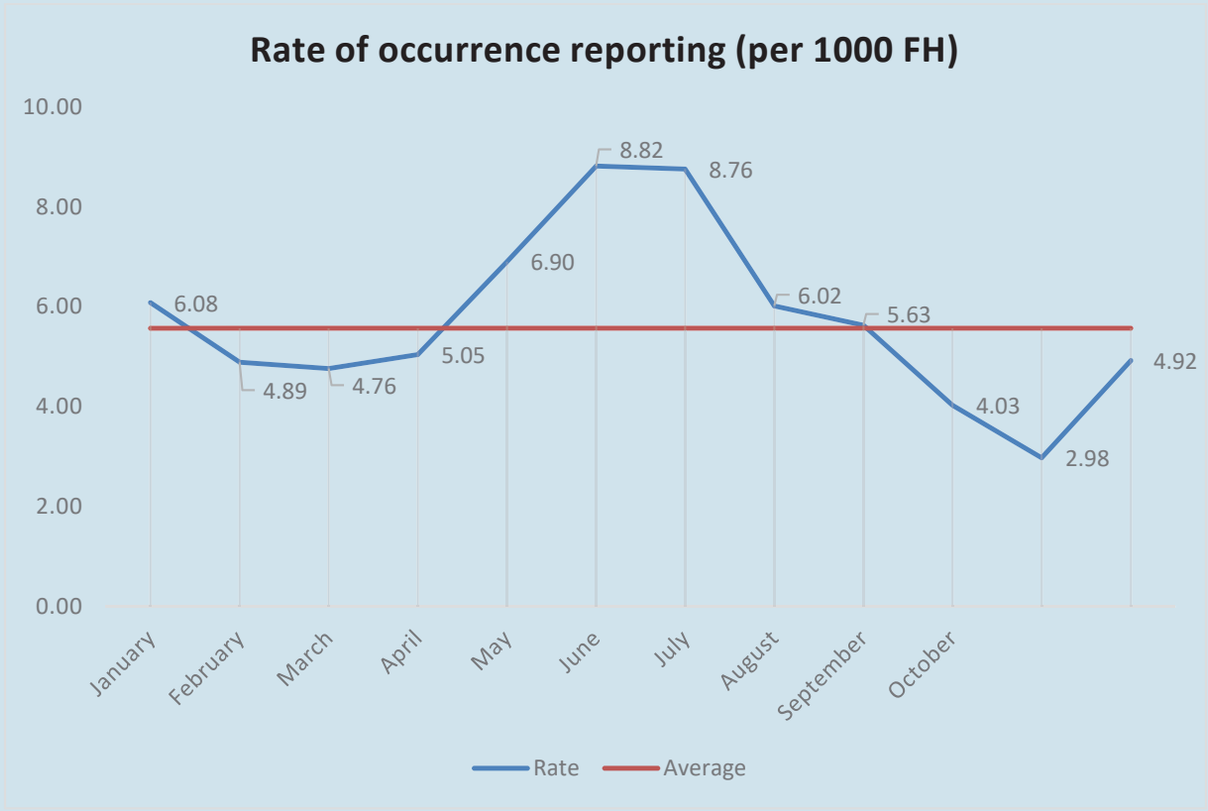
The Taxonomy adopted for the purpose of deriving information related to mandatory and voluntary occurrences was developed by CICTT. The CICTT includes experts from several air carriers, aircraft manufacturers, engine manufacturers, pilot associations, regulatory authorities, transportation safety

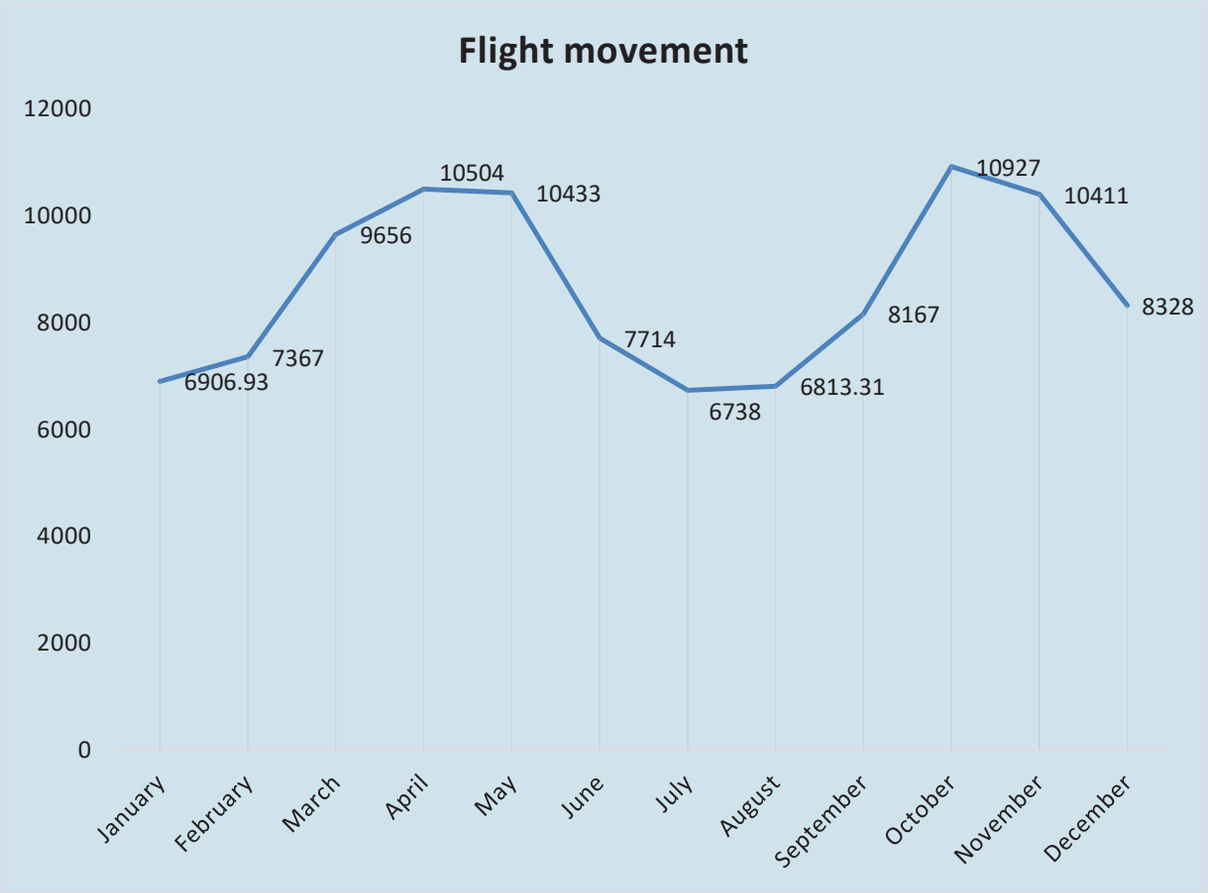
boards, ICAO, and members from Canada, the European Union, France, Italy, Japan, the Netherlands, the United Kingdom, and the United States.

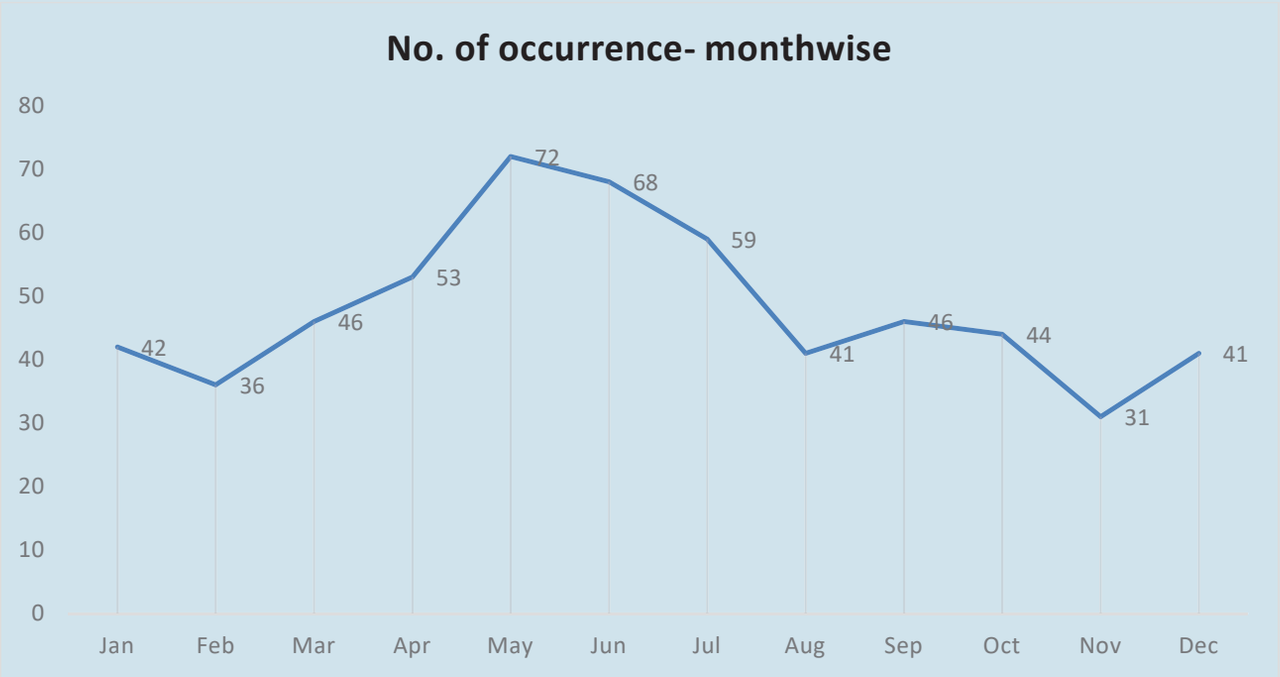
The taxonomy for occurrences has been given below:

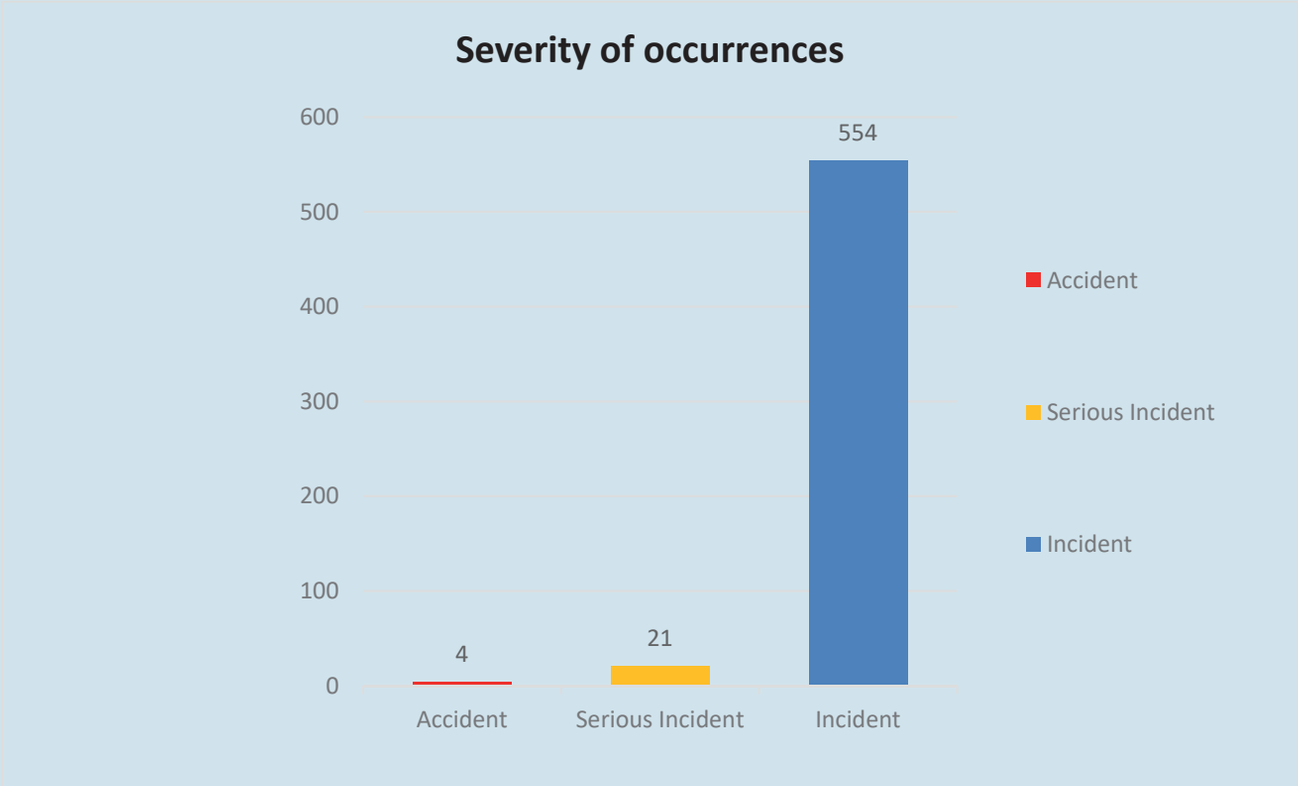
ICAO/CAST Taxonomy for Occurrences

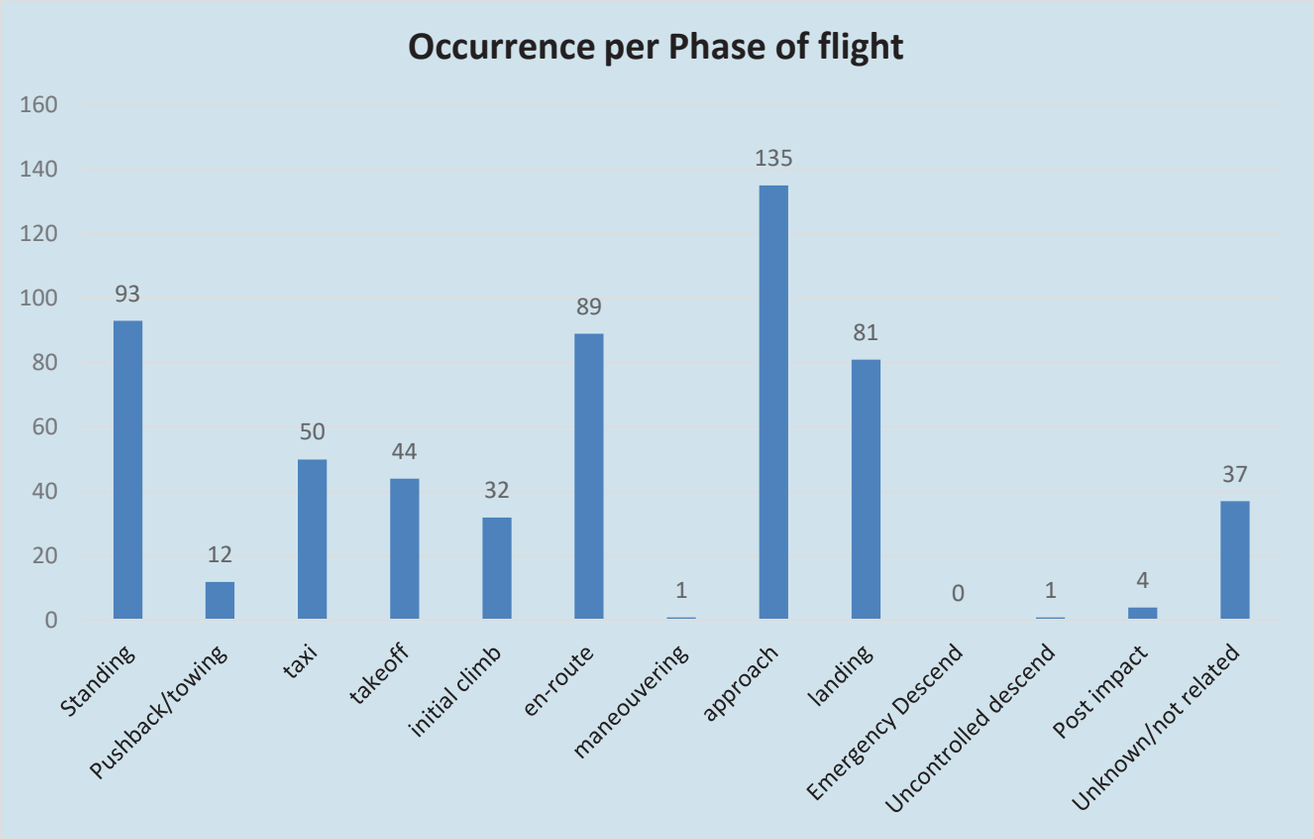
Abnormal Runway Contact (ARC)	Loss of Control-Ground (LOC-G)
Abrupt Maneouver (AMAN)	Loss of Control-In Flight (LOC-I)
Aerodrome (ADRM)	Loss of Lifting condition en-route (LOLI)
Airpox, Mid Air Collision (MAC)	Low Altitude Operations (LALT)
ATM/CNS(ATM)	Medical (MED)
Bird Strike (BIRD)	Navigation (NAV)
Cabin Safety Events(CABIN)	Other (OTHR)
Collision with obstacle(s) during take off and landing (CTOL)	Runway excursion (RE)
Controlled flight into terrain(CFIT)	Runway incursion (RI)
Evacuation (EVAC)	Security related (SEC)
External Load Related (EXTL)	System/Component Failure or Malfunction (SCF-NP)
Fire/Smoke (Non- Impact) (F-NI)	System/Component Failure or Malfunction (SCF-PP)
Fire/Smoke (Post- Impact) (F-Post)	Turbulence encounter (TURB)
Fuel Related (FUEL)	Undershoot/overshoot (USOS)
Glider Towing Related Events (GTOW)	Unintended flight in IMC (UIMC)
Ground Collision (GCOL)	Unknown or undetermined (UNK)
Ground Handling (RAMP)	Wildlife (WILD)
Icing (ICE)	Windshear or Thunderstorm (WSTRW)

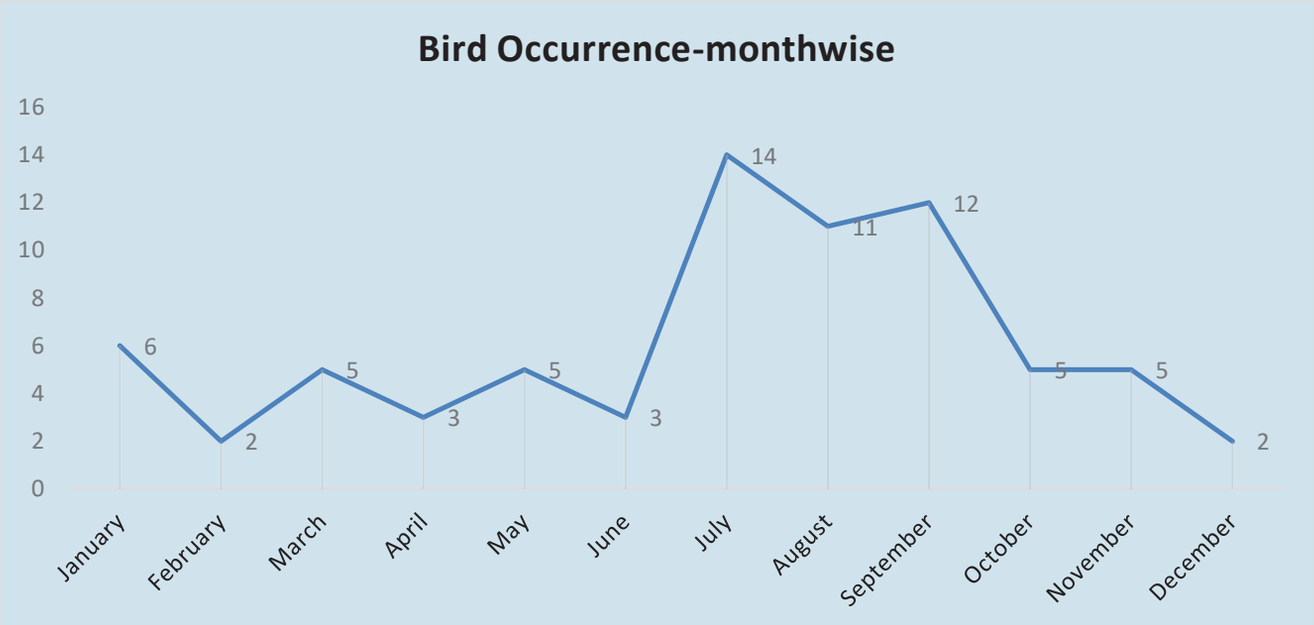

Rate of occurrence reporting (per 1000 FH)
10.00
8.00
6.00
4.00
2.00
0.00
6.08
4.89
4.76
5.05
6.90
8.82
8.76
6.02
5.63
4.03
2.98
4.92
January
February
March
April
May
June
July
August
September
October
Rate
Average

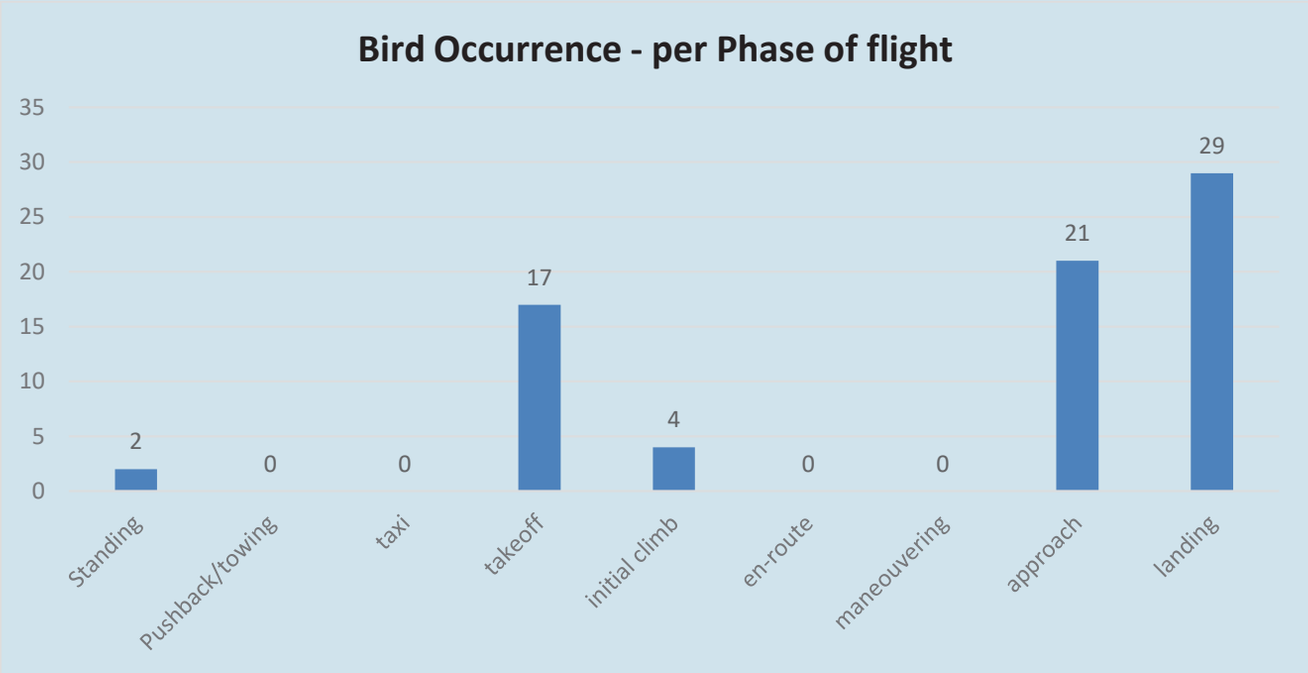

Flight movement
12000
10000
8000
6000
4000
2000
0
6906.93
7367
9656
10504
10433
7714
6738
6813.31
8167
10927
10411
8328
January
February
March
April
May
June
July
August
September
October
November
December

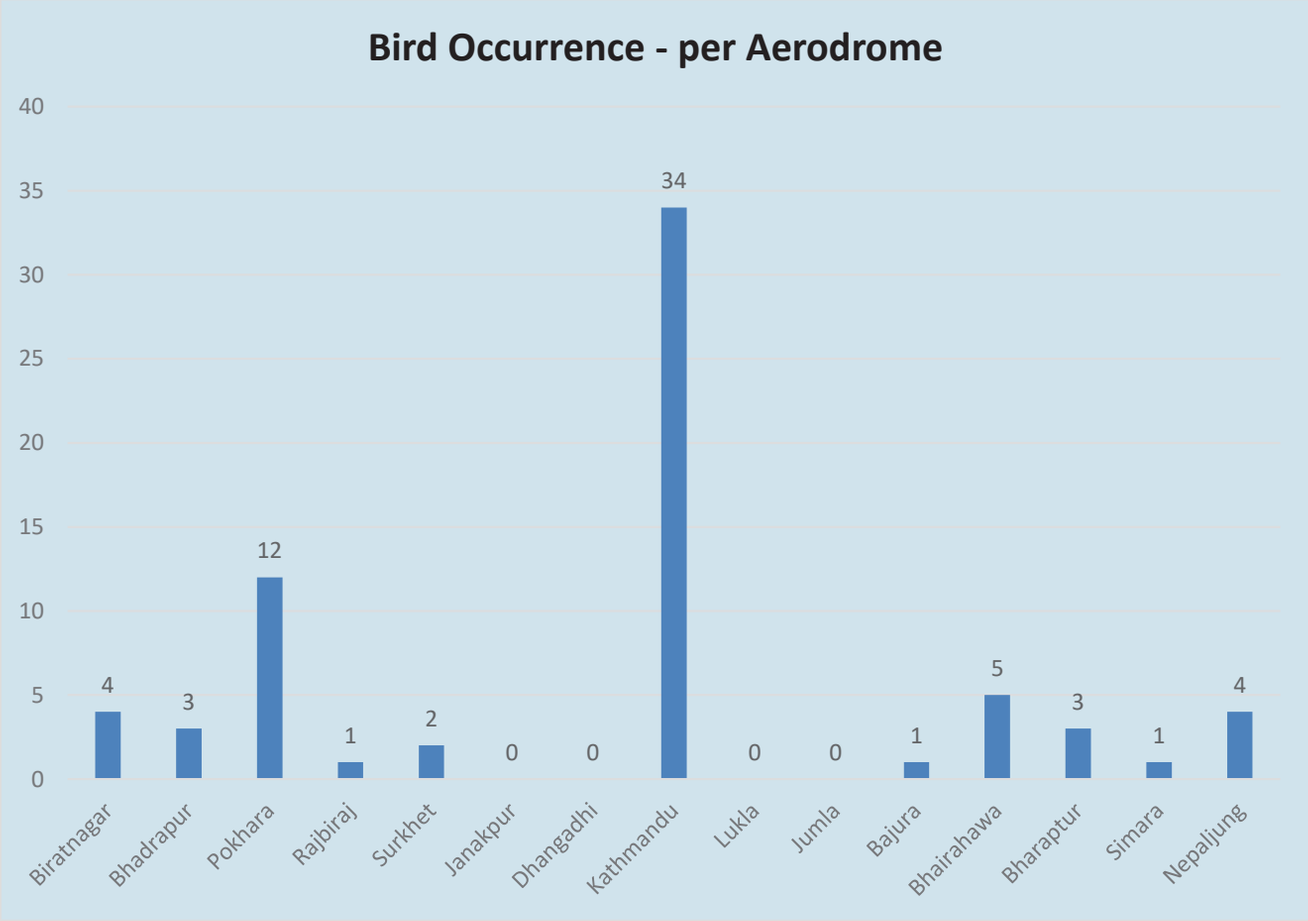

No. of occurrence- monthwise
80
70
60
50
40
30
20
10
0
42
36
46
53
72
68
59
41
46
44
31
41
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

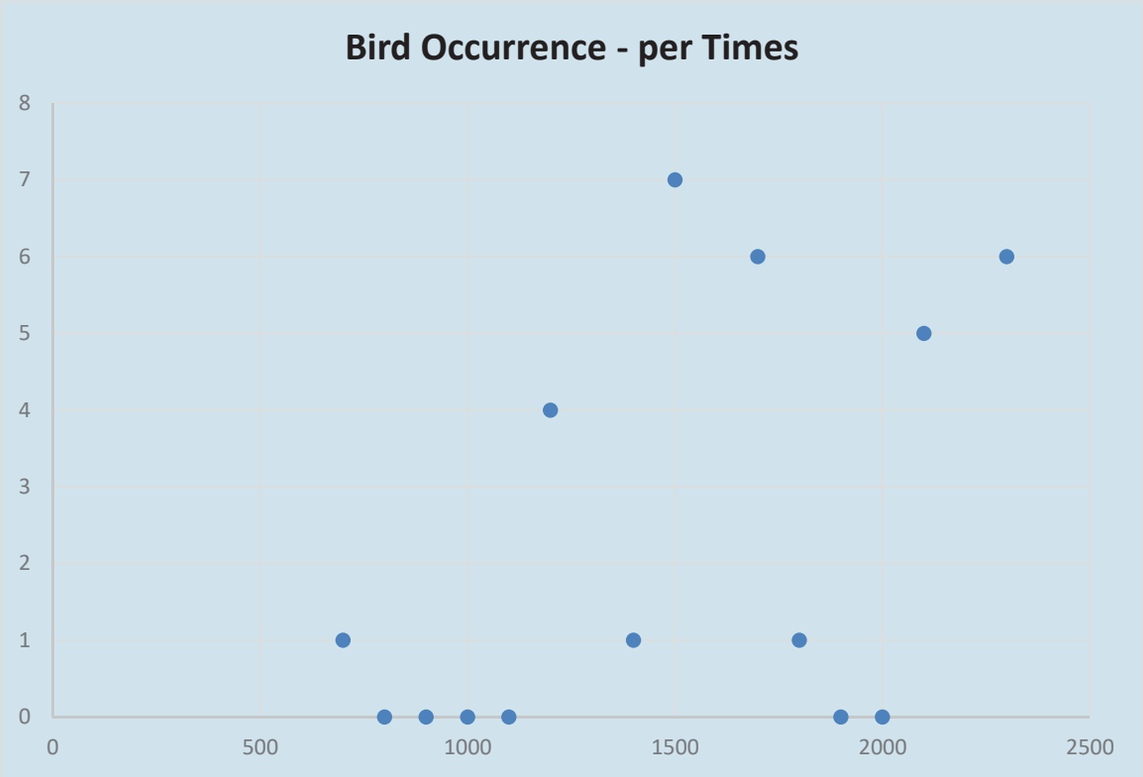

Severity of occurrences
600
500
400
300
200
100
0
4
21
554
Accident
Serious Incident
Incident
Accident
Serious Incident
Incident

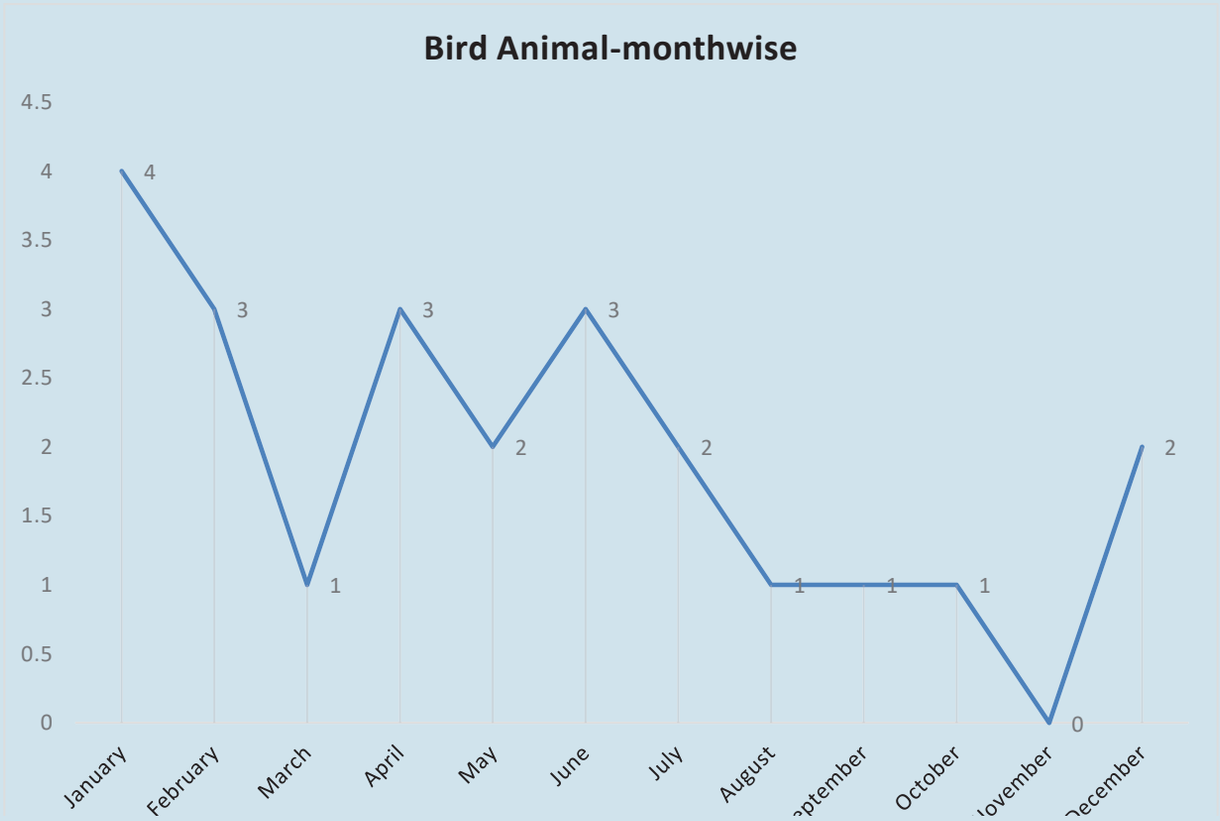

Occurrence per Phase of flight
160
140
120
100
80
60
40
20
0
93
12
50
44
32
89
1
135
81
0
1
4
37
Standing
Pushback/towing
taxi
takeoff
initial climb
en-route
maneouvering
approach
landing
Emergency Descend
Uncontrolled descend
Post impact
Unknown/not related

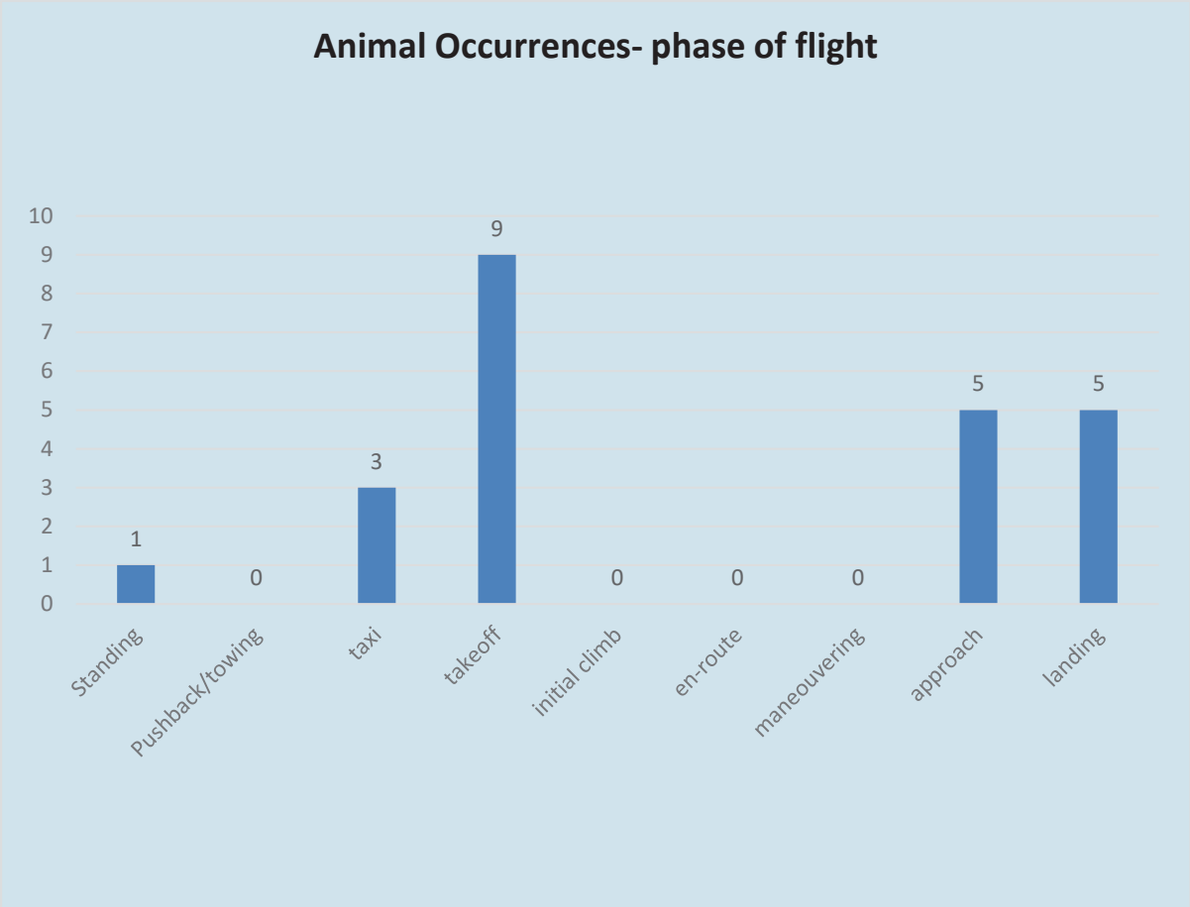

Bird Occurrence-monthwise
16
14
12
10
8
6
4
2
0
6
2
5
3
5
3
14
11
12
5
5
2
January
February
March
April
May
June
July
August
September
October
November
December

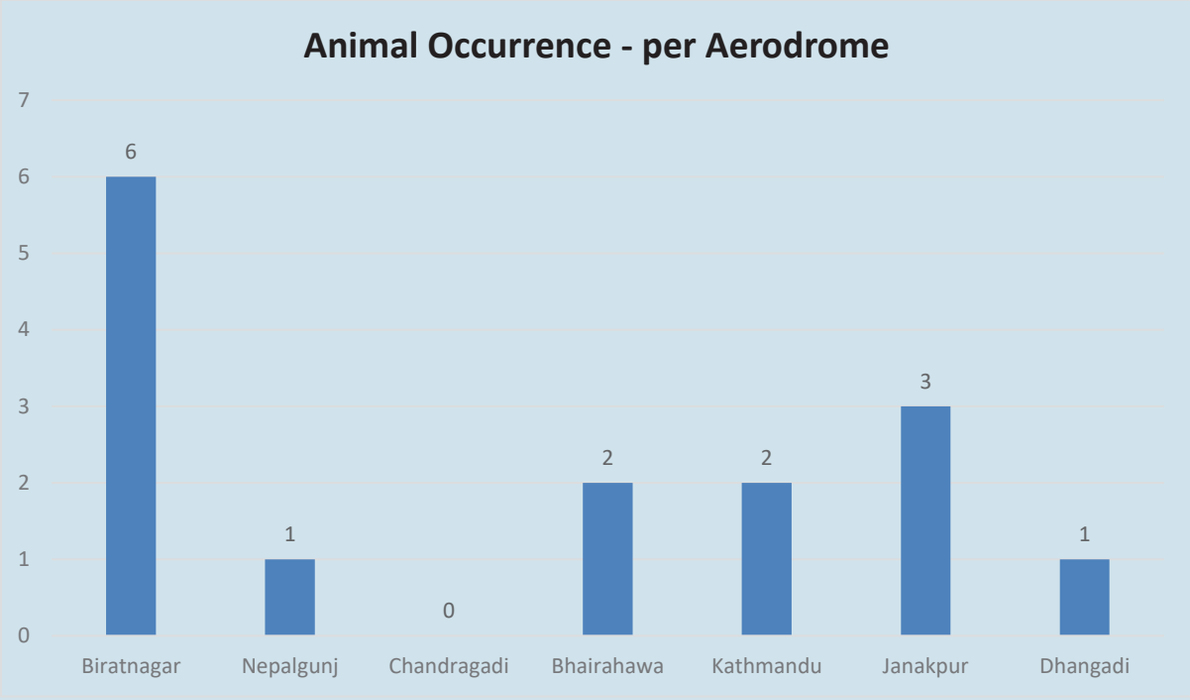

Bird Occurrence - per Phase of flight
35
30
25
20
15
10
5
0
2
0
0
17
4
0
0
21
29
Standing
Pushback/towing
taxi
takeoff
initial climb
en-route
maneouvering
approach
landing


Bird Occurrence - per Aerodrome
40
35
30
25
20
15
10
5
0
4
3
12
1
2
0
0
34
0
0
1
5
3
1
4
Biratnagar
Bhadrapur
Pokhara
Rajbiraj
Surkhet
Janakpur
Dhangadhi
Kathmandu
Lukla
Jumla
Bajura
Bhairahawa
Bharaptur
Simara
Nepaljung


Bird Occurrence - per Times
8
7
6
5
4
3
2
1
0
0
500
1000
1500
2000
2500


Bird Animal-monthwise
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
4
3
1
3
2
3
2
1
1
1
0
2
January
February
March
April
May
June
July
August
October
December

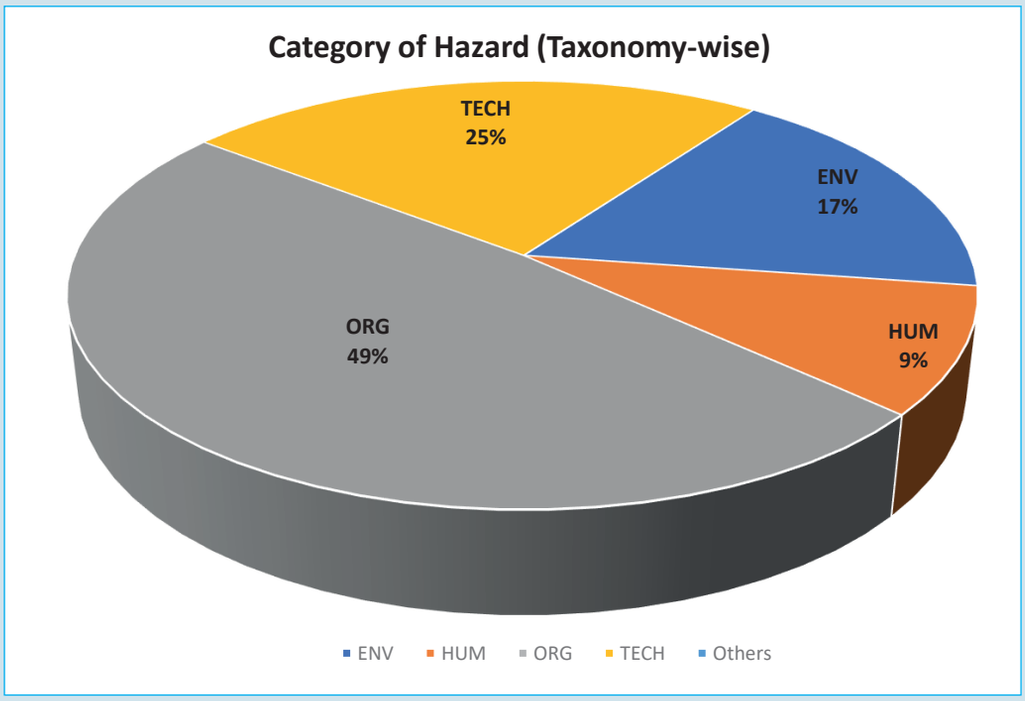

Animal Occurrences- phase of flight
10
9
8
7
6
5
4
3
2
1
0
1
0
3
9
0
0
0
5
5
Standing
Pushback/towing
taxi
takeoff
initial climb
en-route
maneouvering
approach
landing

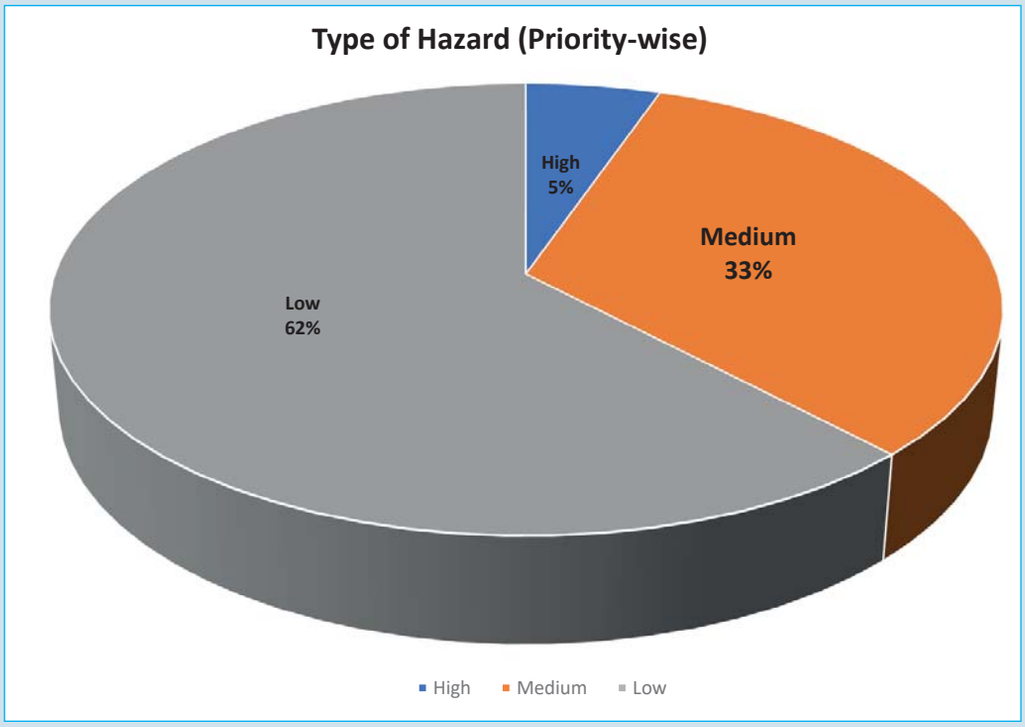

Animal Occurrence - per Aerodrome
7
6
5
4
3
2
1
0
6
1
0
2
2
3
1
Biratnagar
Nepalgunj
Chandragadi
Bhairahawa
Kathmandu
Janakpur
Dhangadi

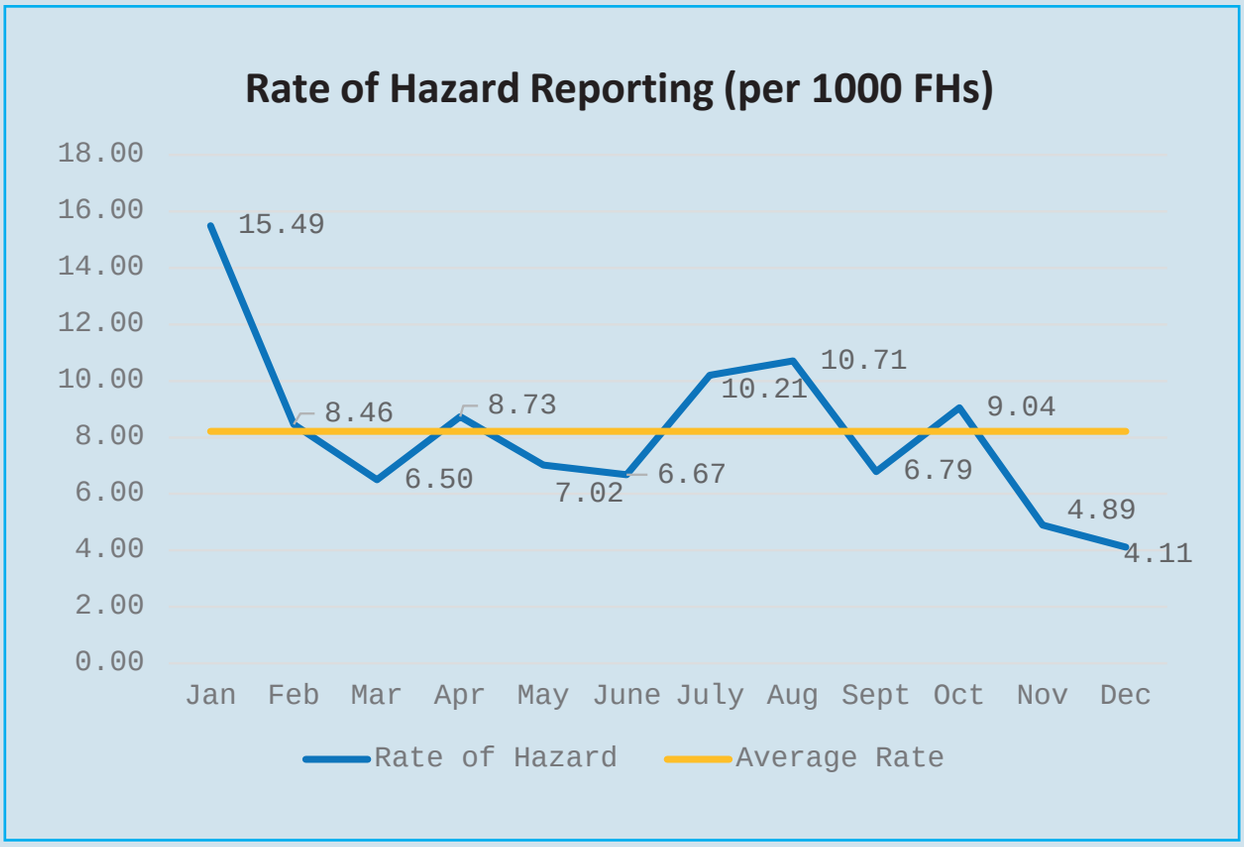
Chapter- 6

Hazard Reporting in 2023

Out of total 1661hazards reported in the year 2023, highest number of reports were related to the organization factors (49%) whereas the lowest number were associated to the Human factors.





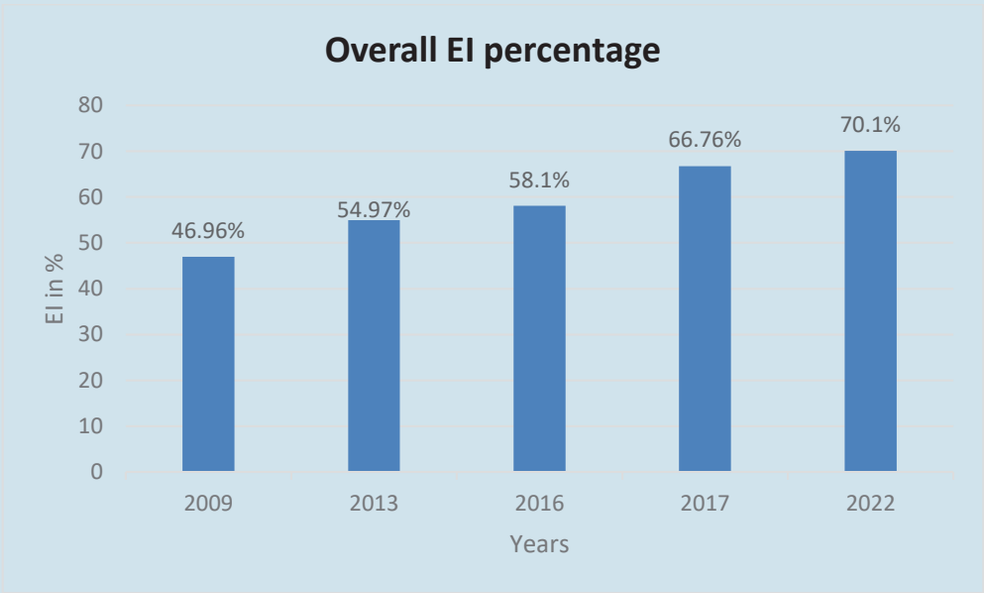

Rate of Hazard Reporting (per 1000 FHs)
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
15.49
8.46
6.50
8.73
7.02
6.67
10.21
10.71
6.79
9.04
4.89
4.11
Jan
Feb
Mar
Apr
May
June
July
Aug
Sept
Oct
Nov
Dec
Rate of Hazard
Average Rate

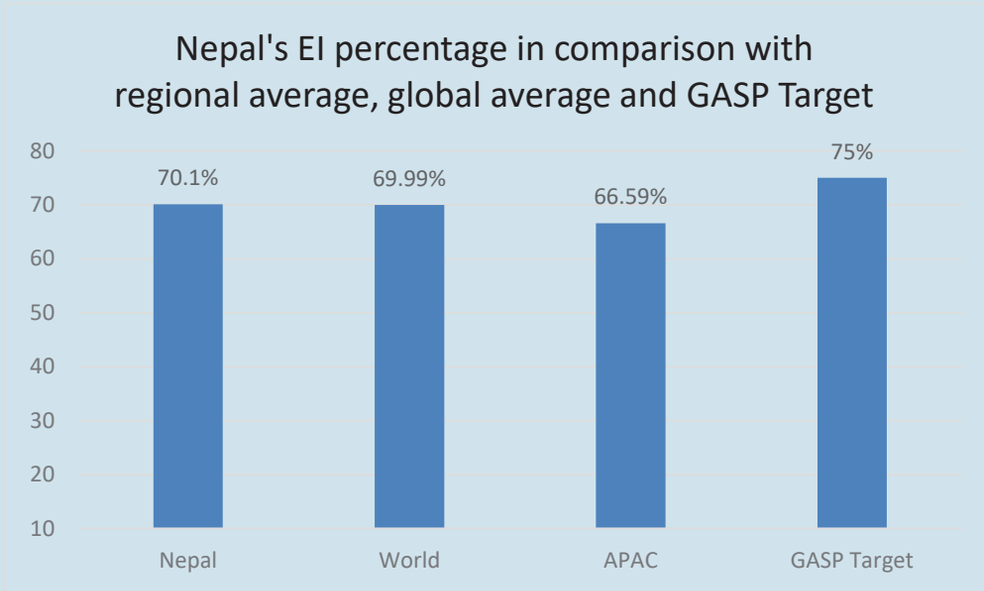
Chapter-7

State Safety Oversight Information

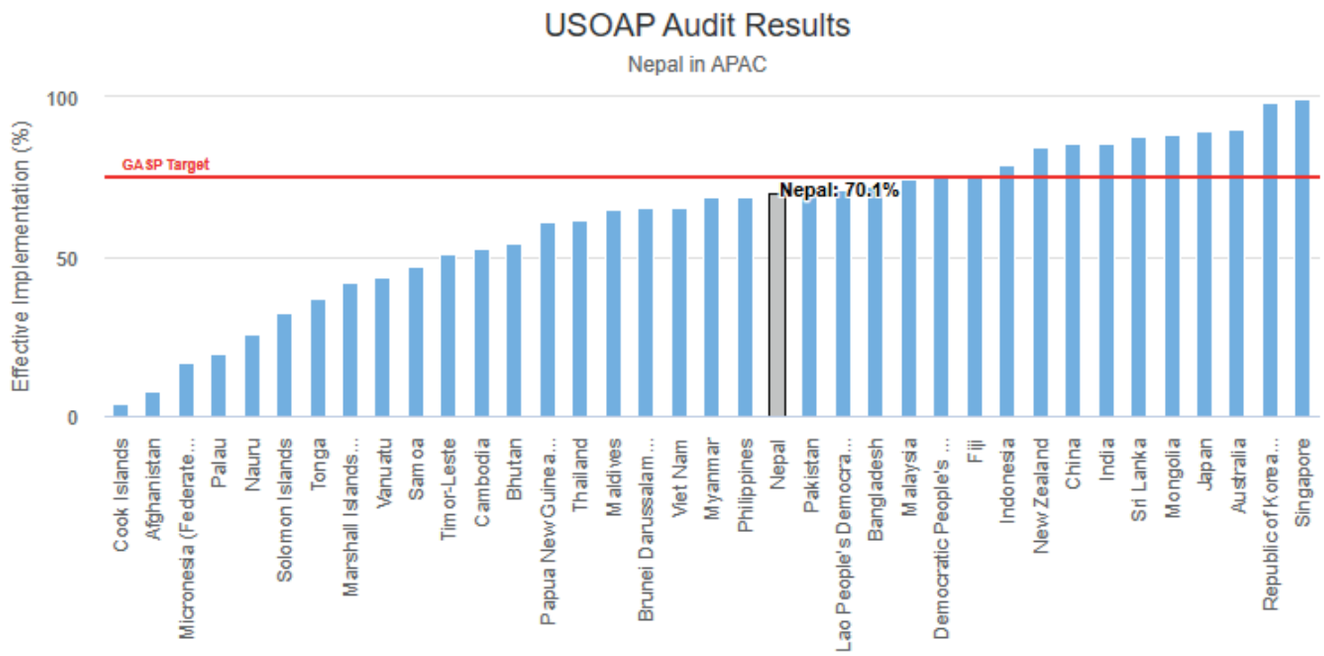
Nepal's State Safety Oversight Capability

The latest ICAO USOAP audit of Nepal was conducted from 13 to 25 April 2022. In this audit State Safety Oversight Capability including 8 Areas and 8 Critical Elements were audited. In this audit Nepal has achieved the Effective Implementation Rate of 70.10% which is above the ICAO Target (60%), Global average rate and Asia Pacific average rate. Nepal has made a significant progress in its oversight capability since the initial audit (in 2009) score of 46.97%.

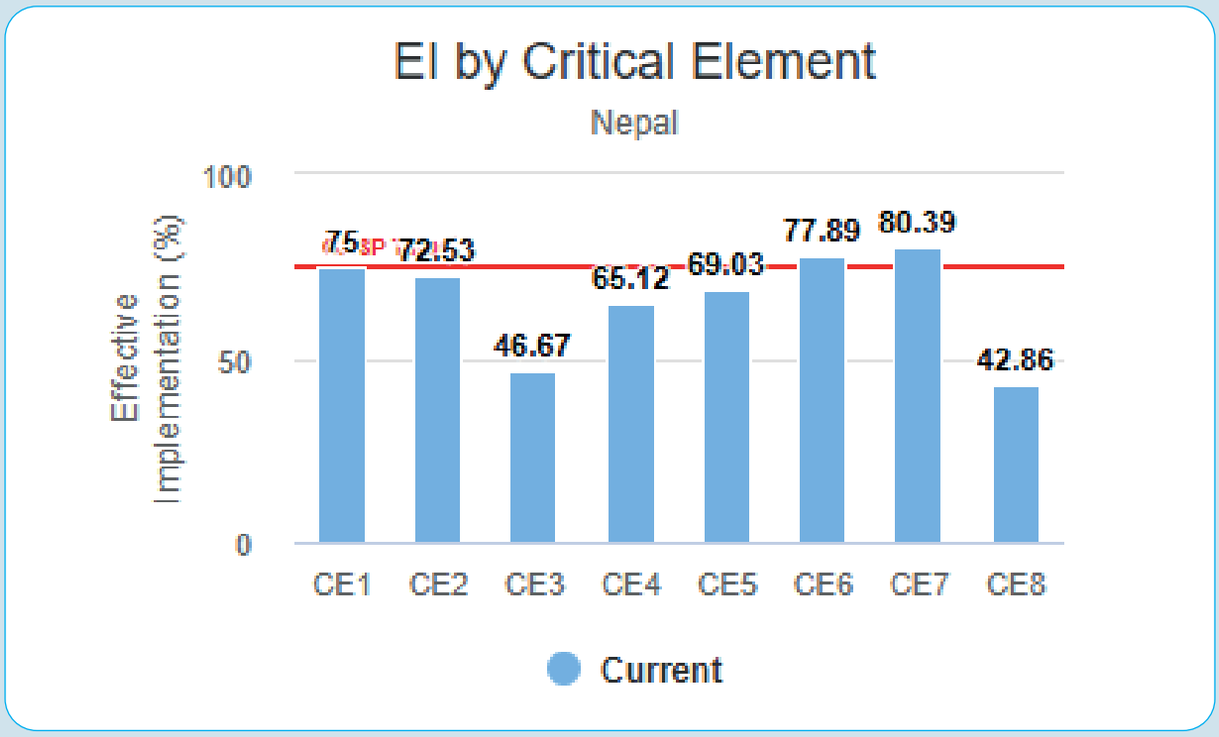




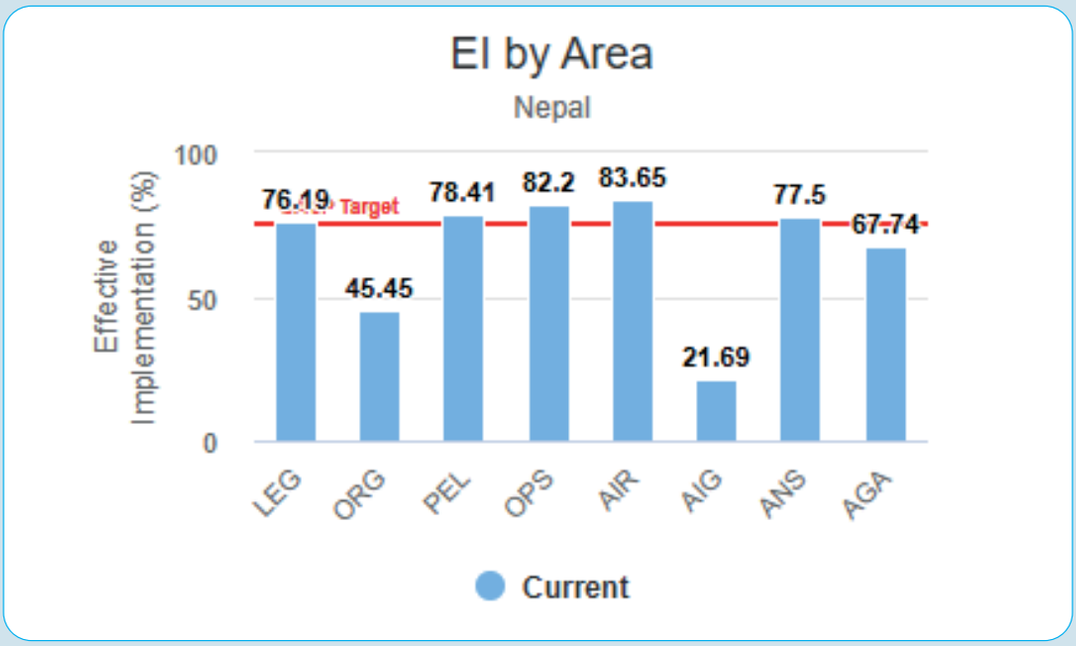
(Source: ICAO iSTARS, date: 17 December 2024)



EI percentage according to the Critical Elements

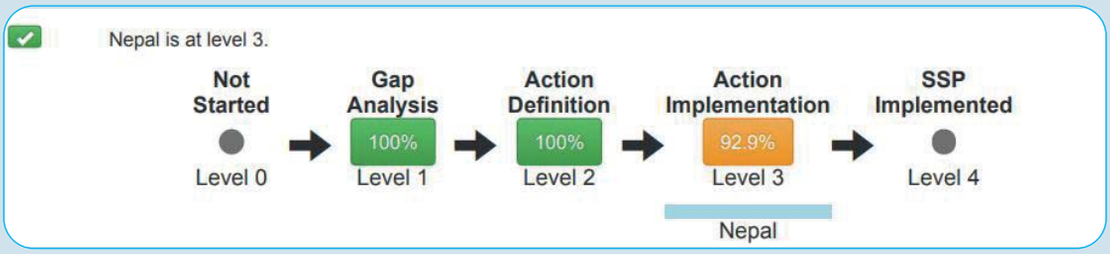


EI percentage according to the Audit Areas



SSP implementation in Nepal

Nepal's SSP implementation Level 3 (92.9% completed) well satisfying the target of State agreed with ICAO which is level 2.

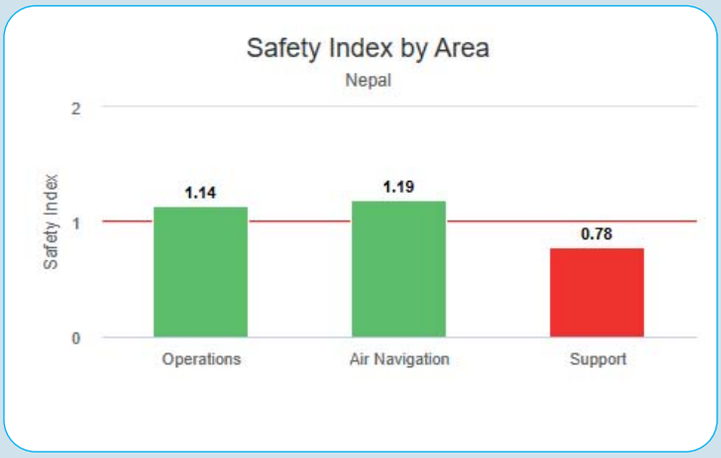


Definitions:

Level 0: States not having started a GAP analysis

Level 1: States having started a GAP analysis

Level 2: States having reviewed all the GAP analysis questions



Nepal has a high Safety Index in only two areas.

In the area of support (LEG/ORG/AIG), the Margin Index should be increased at least by 0.22.

Chapter - 8

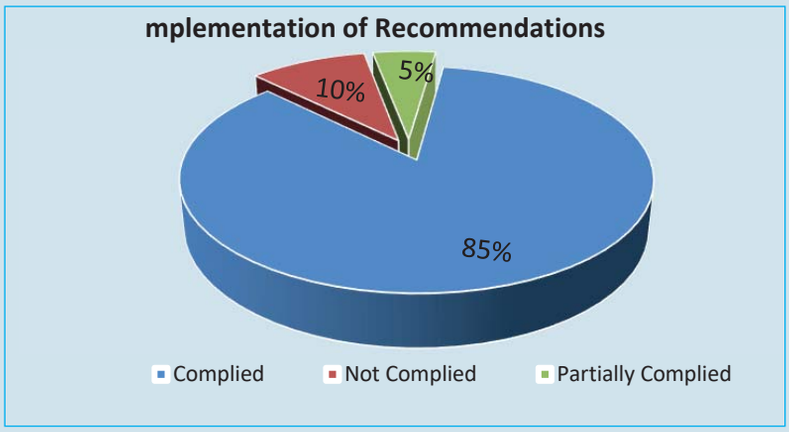
OPERATIONAL SAFETY RISKS IN NEPAL

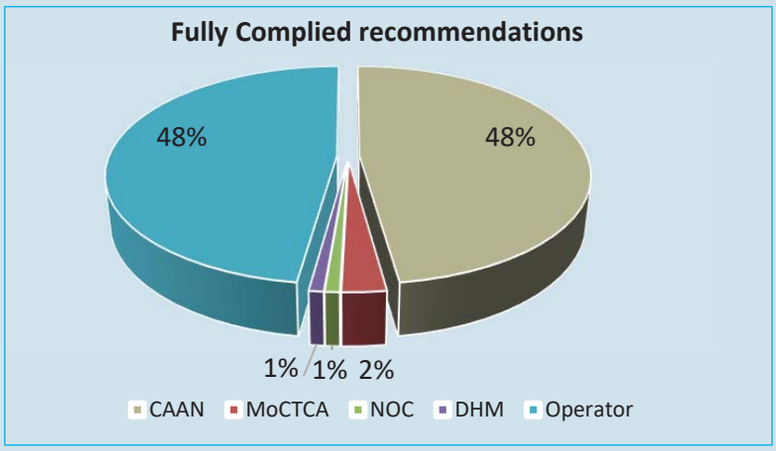
Nepal Aviation Safety Plan (NASP), 2023-2025 developed in congruence with the Global Aviation Safety Plan (GASP), Doc.10004 and Regional Aviation Safety Plan (RASP). NASP (2023-2025) has identified Seven areas of operational safety risk (not in specific order), viz. Controlled Flight into Terrain (CFIT), Loss of Control in Flight (LOC-I), Mid Air Collision (MAC), Runway Incursion (RI), Runway Excursion (RE), Abnormal Runway Contact (ARC) and Wild life Strike (WS).

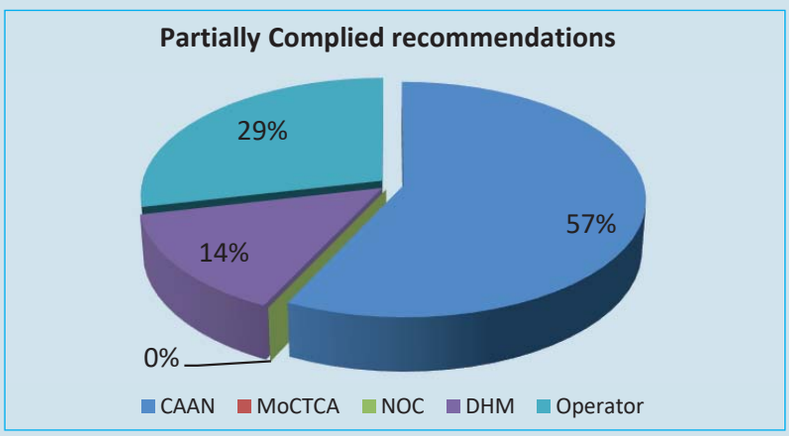
Chapter- 9

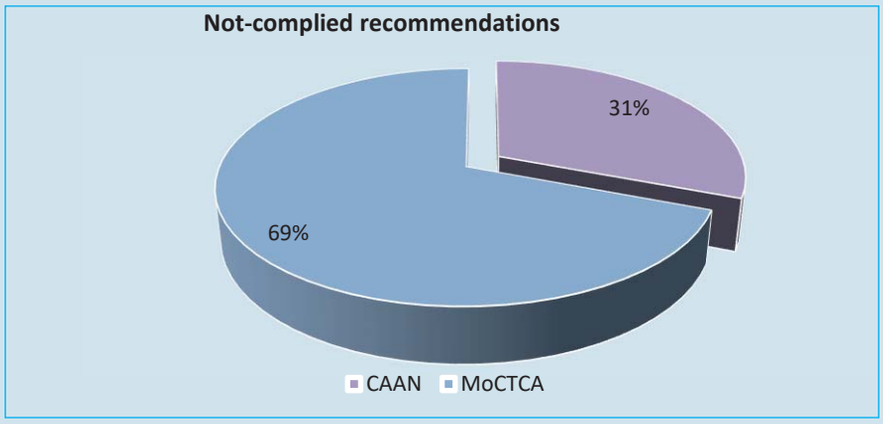
Accident Investigation Recommendation Implementation Status

(Recommendations issued from 2014 to 2023 by Government of Nepal)

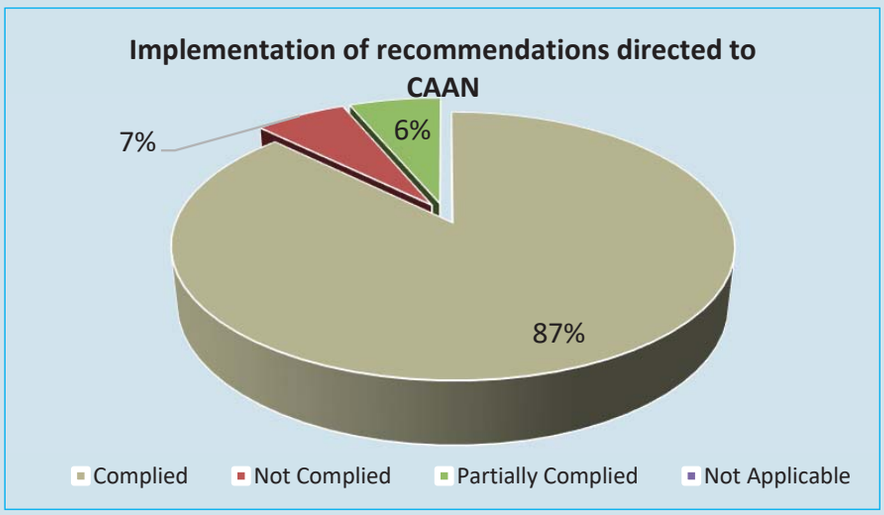


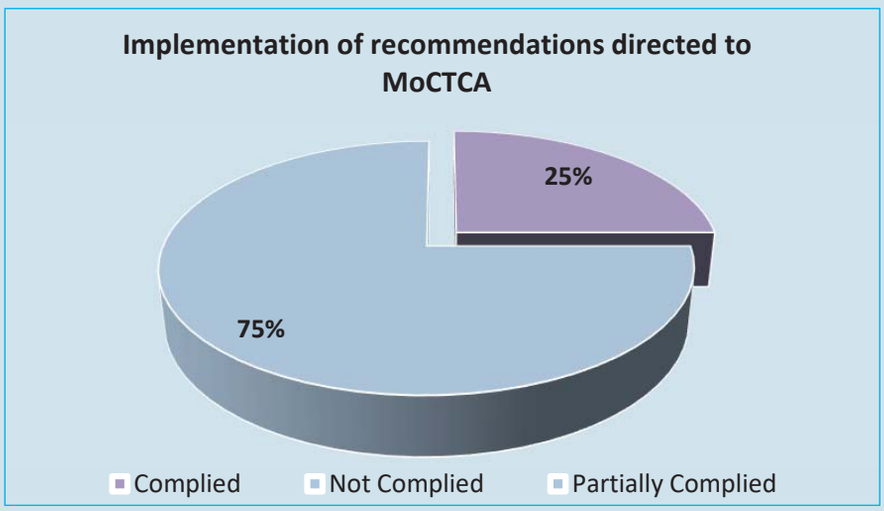


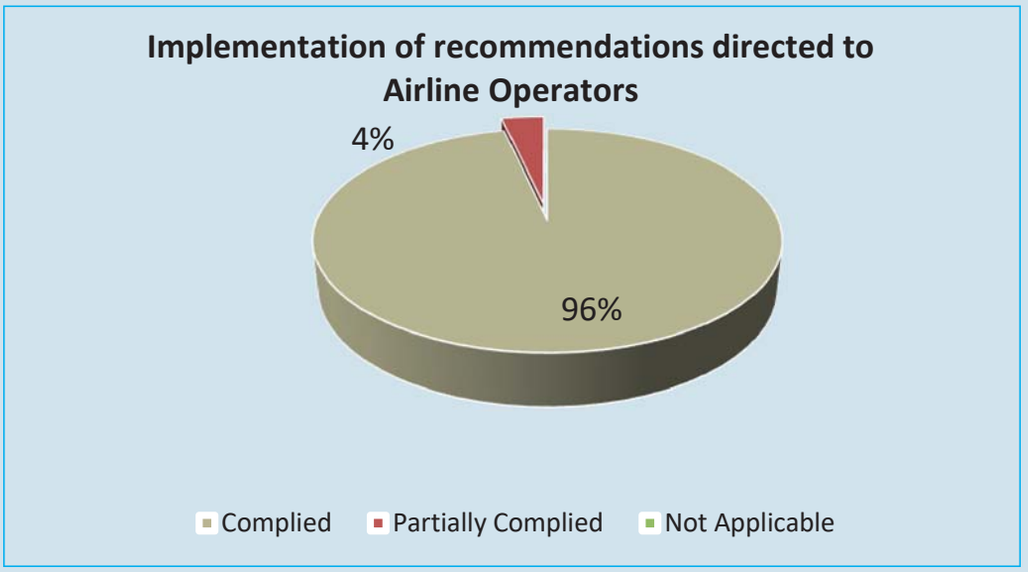




Status of Implementation of Recommendations directed to CAAN, MOCTCA and Airline Operators.





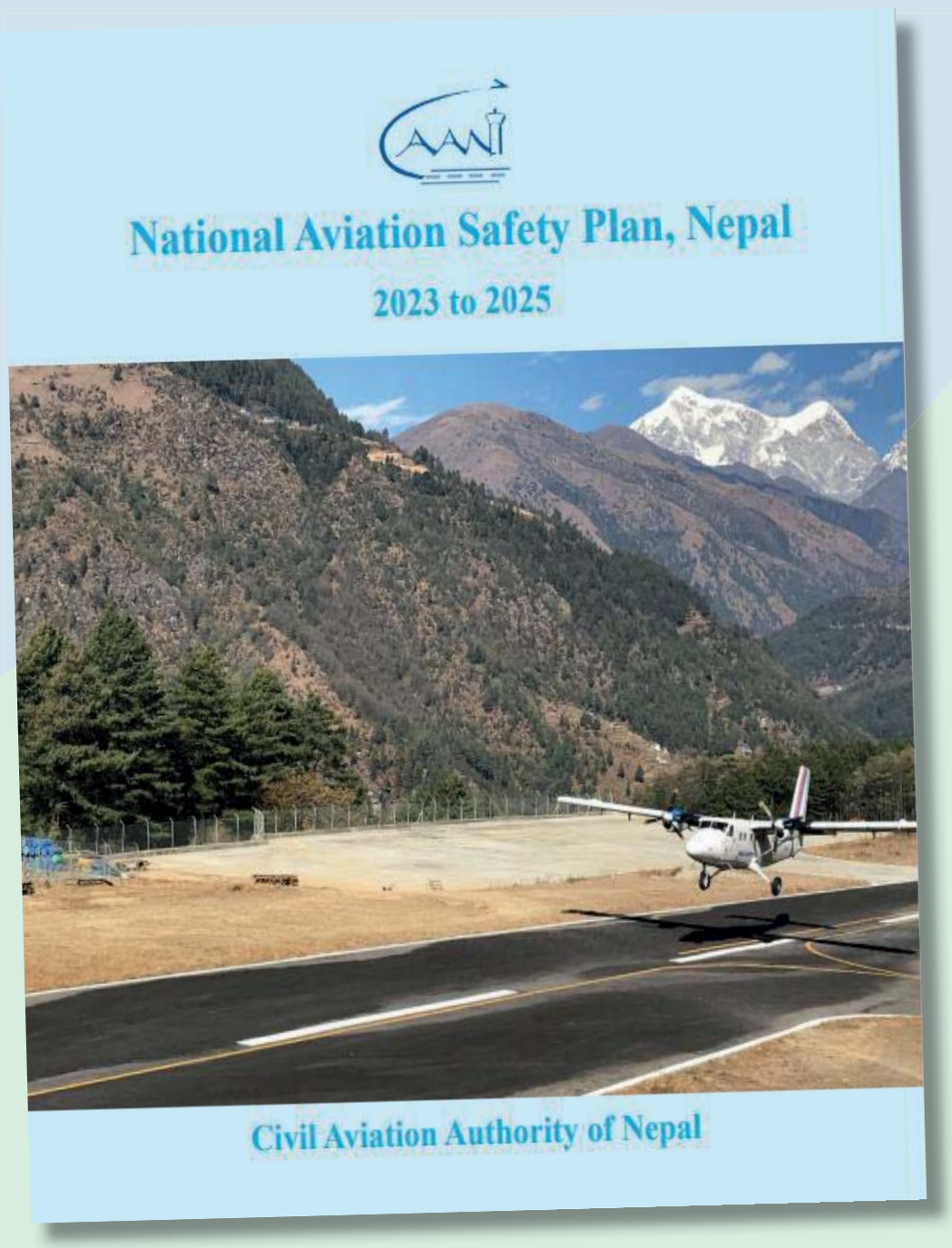


Note:

1. Only the applicable recommendations have been taken into consideration in this report.
2. NOC does not have any not - complied recommendation whereas DHM has one partially complied and zero not complied recommendation;
3. Recommendation given for Czech Republic of has not been excluded in this analysis
4. Recommendations directed to CAAN and Airline Operators have been counted to CAAN

Chapter- 10

NATIONAL AVIATION SAFETY PLAN (NASP), NEPAL (2023 TO 2025)



Goals of NASP

Goal 1
- Achive a continuous reduction of operational safety risks.

Goal 2
- Strengthen safety oversight capabilities of Nepal.

Goal 3
- Implement the State Safety Programme (SSP).

Goal 4
- Increase collaboration at the regional level.

Goal 5
- Expand the use of industry programmes.

Goal 6
- Ensure the appropriate infrastructure is available to support safe operation.

NASP's Goals with Targets

Goal 1

Target 1.1**:** maintain a decreasing trend of the national accident rate.

Goal 2

Target 2.1: Nepal to improve score for the EI of CEs of the Nepal's safety oversight system with focus on priority PQs as follows:

By 2024- 75%
By 2026- 85%
By 2030- 95%

Goal 3

Target 3.1: Nepal to implement the foundation of its SSP by 2023.

Target 3.2: Nepal to work towards an effective SSP as follows:

a. By 2023- Present
b. By 2025- present and Effective

Goal 4

Target 4.1**:** Nepal to use a regional safety oversight mechanism, another State or other safety oversight organization's ICAO recognized functions in seeking assistance to strengthen its safety oversight capabilities by 2023.

Target 4.2: Nepal to contribute information on operational safety risks, including SSP Safety Performance Indicators (SPIs) and emerging issues to Asia Pacific Aviation Safety Group (AP-RASG) by 2025.

Goal 5

Target 5.1: Maintain an increasing trend in industry's contribution in safety information sharing networks to State and region to assist in the development and update of NASP and RASP by 2025

Goal 6

Target 6.1: Maintain an increasing trend with Air Navigation and Aerodrome Infrastructure that meet relevant ICAO Standards by 2025.

Chapter 11

Safety Promotional Activities in 2023

1. Safety/Quality/Oversight Awareness Seminar

- February- Nepalgunj CAO,(ICAO SARPs in National Operating Regulations)
- February- CAAN, Head Office (GNSS Concept & PBN Airspace Procedure & Design Process)
- February- CAAN, Head Office (Effective Implementation of SMS)
- February- GBIA CAO (QMS Requirement & Implementation & Consecutive Role & Preparedness of AEP & SAR Program
- May- Janakpur (ANS Safety Awareness and Regulatory Framework)
- May- Rajbiraj (ANS Safety Awareness and Regulatory Framework)
- April - Surkhet CAO, ANS Seminar on SMS QMS Awareness
- May – Nepalgunj CAO, ANS Seminar on SMS QMS Awareness
- June – TIA CAO, MOS Licensing/Rating of ATC Personnel Awareness & PELR ATSEP Awareness
- 2023 June- Biratnagar CAO, Aerodrome certification and safety awareness
- 2023 July- Nepalgunj CAO, Aerodrome certification and safety awareness
- 2023 June- Biratnagar CAO, ATS Units Training on Establishment of Rescue Sub Centre & SMS through QMS
- 2023 June – Biratnagar CAO, ANS Training on SMS through QMS
- 2023 June – Pokhara International Airport CAO, MET Awareness Training Program

2. SRM Workshop

- 2023 February – Nepalgunj
- 2023 June - Surkhet

3. SMS Workshop and Seminar

- January - Bhairahawa
- February - Pokhara
- March - Biratnagar
- April - Tumlingtar
- April - Jomsom

4. Safety Campaign

- 2023, March - Safety Campaign (in technical collaboration with EASA) held in Kathmandu

Appendix- 1

Record of multi-engine Aeroplane Accident in Nepal

(record of accident till the publication of the report)

S.N.	Date	Registration	Type of A/C	Operator/ Owner	Operation	Place	Fatality
1	5 Nov 1960	9N-AAD	DC-3	Nepal Airlines	Scheduled	Bhairahwa	4
2	1 Aug 1962	9N-AAH	DC-3	Nepal Airlines	Scheduled	TulachanDhuri	10
3	12 July 1969	9N-AAO	DV-3	Nepal Airlines	Scheduled	Near Heatauda	35
4	25 Jan 1970	9N-AAR	F-27	Nepal Airlines	Scheduled	New Delhi	1
5	15 Oct 1973	9N-ABG	DHC- 6	Nepal Airlines	Scheduled	Lukla	None
6	22 Dec 1984	9N-ABH	DHC-6	Nepal Airlines	Scheduled	Cheklatidanda	15
7	02 May 1986	9N-ABI	DHC-6	Nepal Airlines	Scheduled	Sanfebagarirport	None
8	19 Aug 1987	9N-ABB	DHC-6	Nepal Airlines	Scheduled	Dolpa	None
9	9 Jun 1991	9N-ABA	DHC-6	Nepal Airlines	Scheduled	Lukla	None
10	28 Jun 1991	9N-ABS	DHC-6	ATSC,DCA	Charter	Simikot	None
11	26 Sep 1992	9N-ACI	Y-12	Nepal Airways	Scheduled	Lukla	None
12	08 Nov 1993	9N-ACS	Y-12 II	Nepal Airways	Scheduled	Jomsom	None
13	31 Jul 1993	9N-ACL	DO-228	Everest Air	Scheduled	Solighopte	18
14	14 Jan 1995	9N-ABI	DHC-6	Nepal Airlines	Scheduled	KathmanduAirport	2
15	15 Jul 1995	9N-ADB	Y-12	Nepal Airways	Scheduled	Bharatpur	None
16	25 Apr 1996	9N-ABR	HS-748	Nepal Airlines	Scheduled	Meghauli	None
17	28 Jul 1996	9N-ACC	DHC6/300	ATSC,DCA	Charter	Simikot	None
18	23 Dec 1996	9N-ACF	Y-12	Nepal Airways	Scheduled	Dolpa	None
19	21 Aug 1998	9N-ACC	DHC-6	Sangrila Air	Scheduled	Chuchche Khark,Myagdi	18
20	05 Sept 1999	9N-AEG	HS-748	Necon Air	Scheduled	Thankot, Kathmandu	15
21	25 Dec 1999	9N-AFL	DHC-6	Skyline Airways	Scheduled	Burjo Lake, Makwanpur	10
22	26 Feb 2000	9N-ABO	DHC-6	Nepal Airlines	Scheduled	Bajhang	1
23	27 Jul 2000	9N-ABP	DHC-6	Nepal Airlines	Scheduled	Jogbuda,Dadeldhura	25
24	03 Nov 2000	9N-ACV	DO-228	Gorkha Airlines	Scheduled	Lukla	None
25	19 Nov 2000	9N-AFS	DO-228	Cosmic Air	Scheduled	Tumlingtar	None

S.N.	Date	Registration	Type of A/C	Operator/ Owner	Operation	Place	Fatality
26	05 Apr 2001	9N-AEV	DHC-6/300	YetiAirlines	Scheduled	Tumlingtar	None
27	17 Jul 2002	9N-AGF	DHC6/300	Skyline Airlines	Scheduled	Gadgade Danda, Surkhet	4
28	22 Aug 2002	9N-AFR	DHC6/300	Shangrila Air	Scheduled	Pokhara	18
29	21 Apr2004	9N-AEK	B1900D	Buddha Air	Scheduled	TIA	1
30	25 May 2004	9N-AFD	DHC-6/300	Yeti Airlines	Scheduled	Lamjura, Solukhumbu	3
31	30 June 2005	9N-AEO	DO-228	Gorkha Airlines	Scheduled	Lukla Airport	None
32	12 June 2006	9N-AEQ	DHC6/310	Yeti Airlines	Scheduled	Jumla Airport	9
33	03 July2006	9N-AFE	DHC-6/310	Yeti Airlines	Scheduled	Bajura Airport	None
34	08 Oct2008	9N-AFE	DHC-6/300	Yeti Airlines	Scheduled	Lukla Airport	18
35	24 Aug2010	9N-AHE	DO-228	Agni Air	Scheduled	Sikharpur, Makawanpur	14
36	15 Dec 2010	9N-AFX	DHC-6/300	Tara Air	Scheduled	Okhaldhunga,	22
37	25 Sept2011	9N-AEK	Beech1900D	Buddha Air	Scheduled	Kotdanda, Lalitapur	19
38	14 May 2012	9N-AIG	DO-228	Agni Air	Scheduled	Jomsom Airport	15
39	21 Sept2012	9N-ABQ	Do-228	Tara Air	Scheduled	Dolpa	None
40	28/Sept. 2012	9N-AHA	DO-228	Sita Air	Scheduled	Manohara, Bhaktapur	19
41	16 May 2013	9N-ABO	DHC-6/300	Nepal Airlines	Scheduled	Jomsom Airport	None
42	01 June 2013	9N-AHB	DO-228	Sita Air	Scheduled	Simikot Airport	None
43	16 Feb 2014	9N-ABB	DHC-6/300	Nepal Airlines	Scheduled	Masinelek, Arghakhanchi	18
44	24 Feb 2016	9N-AHH	DHC-6/400	Tara Air	Scheduled	Dana, Myagdi	23
45	27 May 2017	9N-AKY	Let410	Summit Air	Cargo	Lukla Airport	2
46	28 Nov 2017	9N-ABM	DHC-6/300	Tara Air	Scheduled	Simikot	None
47	14 April 2019	9N-AMH	LET 410	Summit Air	Scheduled	Lukla Airport	1+2
48	28 March 2020	9N-AKU	Y12 E	Nepal Airlines Corp.	Chartered	Nepalgunj Airport	None
49	May 29, 2022	9N- AET	DHC6	Tara Air	Scheduled	Titi, Ghasa Area, Mustang	22
50	January 15, 2023	9N-ANC	ATR 72-500	Yeti Airlines	Scheduled	Pokhara valley, Seti River	72
51	July 24 2024	9N-AME	CRJ 200 LR	Saurya Airlines	Ferry Flight	TIA, Kathmandu	18

Appendix -2

Record of single Engine Aeroplane Accidents in Nepal

S.N.	Date	Registration	Type of A/C	Operator/ Owner	operation	Place	Fatality
1	31 Mar 1975	9N-AAZ	PC-6	Nepal Airlines	Charter	Bouddha, Kathmandu	5
2	30 Oct 1981	9N-ABJ	PC-6	Nepal Airlines	Charter	Biratnagar	10
3	20 Nov 1998	9N-ABK	PC-6/ B2-H4	Nepal Airlines	Charter	Phakding	1
4	17 Jan 1999	9N-ADA	Cessna-208	Necon Air	Charter	Jumla	5
5	21 Nov 2011	9N-AJM	Cessna-208	Makalu Air	Cargo	TalchaAirport	None
6	26 Feb 2016	9N-AJB	PAC750XL	Air Kashtha-mandap	Charter	Chilkhaya Kalikot	2
7	08 Apr 2016	9N-AKC	Cessna-208	Makalu Air	Cargo	Near Simikot	None
8	16 May 2018	9N-AJU	Cessna-208	Makalu Air	Cargo	Simikot Pass	2

Appendix -3

Record of helicopter accidents in Nepal

(record of accident till the publication of the report)

S.N.	Date	Registration	Type	Operator/Owner	Place	Fatality
1	27 Dec 1979	9N-RAE	Allutte-III	VVIP	Langtang	6
2	27 Apr 1993	9N-ACK	Bell-206	Himalayan Helicopter	Langtang	None
3	24 Jan 1996	9N-ADM	MI-17	Nepal Airways	Sotang	None
4	30 Sep 1997	9N-AEC	AS-350	Karnali Air	ThuptenCholing	1
5	13 Dec 1997	9N-ADT	MI-17	GorkhaAirlines	Kalikot	None
6	04 Jan 1998	9N-RAL	Bell-206	VVIP Flight	Dipayal	
7	24 Oct 1998	9N-ACY	AS-350B	Asian Airlines	MulKhark	3
8	30 Apr 1999	9N-AEJ	AS-350BA	Karnali Air	Lisunkhu,Sindhupalchowk	None
9	31 May 1999	9N-ADI	AS-350B2	ManakamanaAirways	Ramechhap	None
10	11 Sep 2001	9N-ADK	MI-17	Air Ananya	Mimi	None
11	12 Nov 2001	9N-AFP	AS-350B	Fishtail Air	Rara Lake, Mugu	4
12	12 May 2002	9N-AGE	AS 350B2	Karnali Air	Makalu Base Camp	None
13	30 Sep 2002	9N-ACU	MI-17	Asian Airlines	Sholumkhumbu*	11
14	(MI8-MTV)	AsianAirlines	Sholumkhumbu*	11	None	2
15	28 may 2003	9N-ADP	MI-17 IV	Simrik Air	EverestBase Camp	2
16	04 Jan 2005	9N-AGG	AS-350BA	Air DynastyHeliService	ThhoseVDC,Ramechhap	3
17	02 Jun 2005	9N-AND	MI-17	Shree Airlines	EverestBase Camp.	None
18	07 May 2006	9N-ADT	MI-17 MTV1	HeliHansaServices	Dhawalagiri BaseCamp	None
19	08 Aug 2006	9N-AGS	MI-17	Karnali Air	TI Airport,KTM	None
20	03 Sep 2006	9N-ACR	AS-350BA	Air DynastyHeliService	Dhawalagiri BaseCamp	None
21	23 Sep 2006	9N-AHJ	MI-17	Shree Airlines	Ghunsa, Taplejung	24
22	23 Nov 2006	9N-ADO	MI-17	Simrik Air	Raralihi, Jumla	None
23	29 Jun 2008	9N-AIA	AS-350	Fishtail Air	Annapurna Base Camp	None
24	07 Nov 2010	9N-AIX	AS 350B3	Fishtail Air	Amadablam Mountain	2
25	29 Nov 2011	9N-AIK	AS 350B	Fishtail Air	Solukhumbu	None
26	19 Jun 2013	I-VIEW	AS 350B3	Fishtail Air	Simikot, Muchu	1
27	03 Aug 2014	9N-AJI	AS 350B3	Fishtail Air	Sindhupalchok	1
28	02 Jun 2015	9N-AJP	AS 350B3	MountainHelicopter	YamunaDanda,Sindhupalchok	4
29	22 Jun 2015	9N-AKF	AS 350B3e	Simrik Air	Samdo, Gorkha	None
30	17 Mar 2016	9N-AJI	AS 350B3	Fishtail Air	Langtang	None
31	08 Aug 2016	9N-AKA	AS 350B3	Fishtail Air	Betani, Nuwakot	7
32	30 June 2018	9N-ALR	AS 350B2	Simrik Air	Grandy Roof-topHelipad	None
33	14 Aug. 2018	9N-AHV	AS350 B	Manang Air	Hilsa,Humla	1
34	8 Sept. 2018	9N-ALS	AS350 B3	Altitude Air	Dhading	6
35	27 Feb. 2019	9N-AMI	AS350 B3 E	Air Dynasty	Pathivara,Taplejung	7
36	14 April 2019	9N-ALC	AS350	Manang Air	Lukla Airport	None
38	5-May-23	9N-AJZ	AS350B3e	Simrik Air	Chumrung, Sankhuwasabha	1
39	11-Jul-23	9N-AMV	AS350 B3e	Manang Air	Chholing, Lamjura, Solukhumbu	6
40	14 Oct., 2023	9N-ANJ	AS350 B3e	Manang Air	Lobuche, Solukhumbu	1
41	7-Aug. 2024	9N-AJD	AS350 FX2	Air Dynasty	Shivapuri-7 Suryachaur Nuwakot	5

Appendix – 4

Record of foreign-registered aircraft accidents in Nepal

S.N.	Date	Registration	Type	Operator/ Owner	Operation	Place	Fatality
1	30 Aug 1955	VT-AZX	DC-3	Kalinga Air	Scheduled	Simara	2
2	15 May 1956	VT-DBA	DC-3	Indian airlines	Scheduled	Kathmandu	14
3	24 Mar 1958	VT-CYN	DC-3	Indian Airlines	Scheduled	Patnebhnajyang	20
4	10 May 1972	HS-TGU	DC-8-33	Thai Airways International	Scheduled	TIA	0+1
5	31 Jul 1992	HS-TID	A 310	Thai Airways	Scheduled	Gyangphedi	113
6	28 Sep 1992	AP-BCP	A 310	Pakistan International Airlines	Scheduled	Bhattedanda	167
7	07Jul 1999	VT-LCI	B727(200)	Lufthansa	Cargo	Bhasmasur Hill, Kathmandu	5
8	4 Mar 2015	TC-JOC	A330-300	Turkish Airlines	Scheduled	TIA	None
9	12 Mar 2018	S2 - AGU	DHC 8 D	US Bangla	Scheduled	TIA	51
10	20 April 2018	9M-LNJ	B737-900	Malindo Air	Scheduled	TIA	0

Abbreviations and Acronyms

AGA - Aerodrome and Ground Aids

AIG - Aircraft Accident and Incident Investigation

AIR – Airworthiness

Airprox- Aircraft Proximity

ANS - Air Navigation Services

APAC - Asia Pacific

APRAST - Asia Pacific Regional Aviation Safety Team

ATM - Air Traffic Management

ATS - Air Traffic Services

CAAN - Civil Aviation Authority of Nepal

CAP - Corrective Action Plan

CAST - Commercial Aviation Safety Team

CE - Critical Element

CFIT - Controlled Flight into Terrain

CICTT - CAST/ICAO Common Taxonomy Team

DHM - Department of - Hydrology and Meteorology

EI - Effective Implementation

FH - Flying Hours

GASP - Global Aviation Safety Plan

HRC - High Risk Category

ICAO - International Civil Aviation Organization

ICVM - ICAO Coordinated Validation Mission

LEG - Legislation

LOC-I - Loss of Control- In Flight

MAC - Mid Air Collision

MoCTCA - Ministry of Culture, Tourism and Civil Aviation

MOR - Mandatory Occurrence Reporting

MTOW - Maximum Take-Off Weight

NASP - Nepal Aviation Safety Plan

NAV - Navigation

OPS - Operations

ORG - Organization

PEL - Personnel Licensing

PQs - Protocol Questions

RASG - Regional Aviation Safety Group

RASP - Regional Aviation Safety Plan

RE - Runway Excursion

RI - Runway Incursion

RS - Runway Safety

SARPs - Standards and Recommended Practices

Sch. - Scheduled

SEI - Safety Enhancement Initiative

SMS - Safety Management System

SMSIGM - Safety Management System Implementation Guidance Material

SRPWG - Safety Reporting Programme Working Group

SSP - State Safety Programme

STOL - Short Take-off and Landing

TIA - Tribhuvan International Airport

USOAP - Universal Safety oversight Audit Programme

WS - Wildlife Strike

Civil Aviation Authority of Nepal

Aviation Safety and Security Regulation Directorate

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