## 2022 Full Year Accident Update

Performance at 31<sup>st</sup> December 2022



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Source: IATA Safety report - 2022



## 2022 Accidents



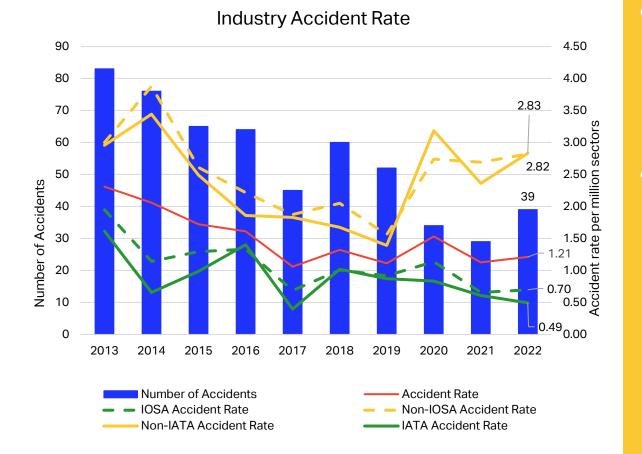
### **Accidents Overview**

	2020	2021	2022	5-Year Average
Accident Count	34	29	39	43
Accident Rate	1.53	1.13	1.21	1.26
Jet Hull Losses	3	3	5	5
Turboprop Hull Losses	4	5	5	4
Fatal Accidents	4	7	5	7
Fatalities on-Board	125	121	158	231
Fatality Risk	0.09	0.23	0.11	0.13
IATA Members	13	11	11	16
IOSA Carriers	19	13	17	22
Sectors - per million sectors	22.1	25.7	32.2	34.4
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### Industry Accident Rate All accidents per million sectors

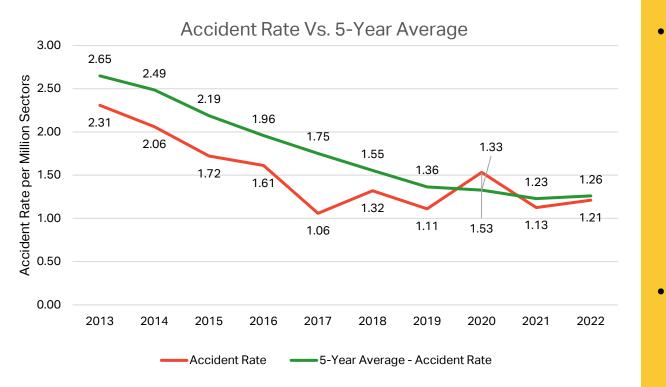


- The industry accident rate went from 1.13 in 2021 up to 1.21 accidents per million sectors in 2022.
- The accident rate for IOSAregistered carriers in 2022 was lower than that for non-IOSA carriers (0.70 vs 2.82) and is below the 2022 industry accident rate of 1.21.



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### Longer Term View All accidents per million sectors



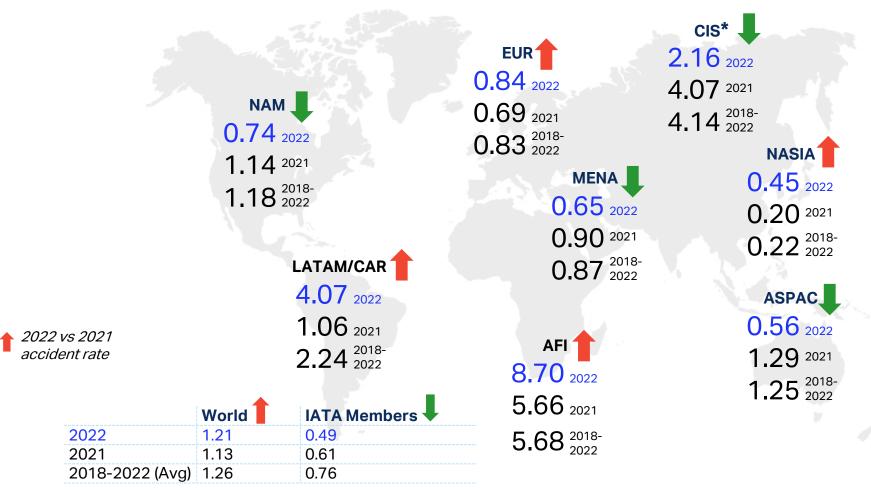
- The industry has improved its overall safety performance over the last ten years by
  - 52%, with an accident rate in 2022 of 1.21 per million sectors, compared to 2.31 in 2013
  - 48%, with a 5-year (2009-2013) rolling average of 2.65, compared to current 5year (2018-2022) average of 1.26 accidents per million sectors
- The 2022 industry accident rate of 1.21 is below the 5-year (2018-2022) accident rolling average of 1.26.



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### All Accident Rate per Region of Operator 4 regions witnessed an increase in the accident rate per million sectors



\* CIS sectors may undergo larger revisions than normal once actual flown sectors becomes available – this will affect accident rate as well as fatality risk calculations

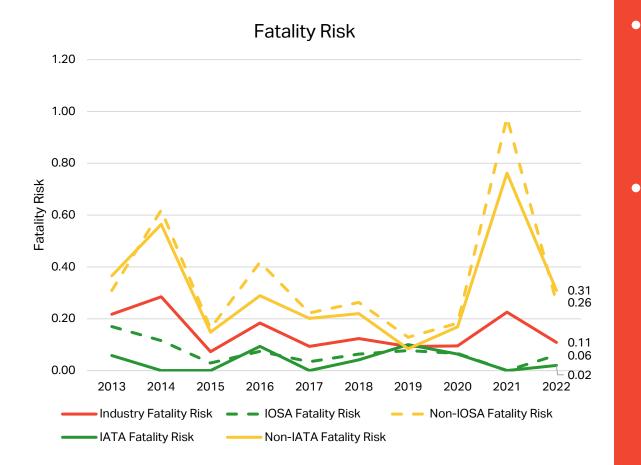
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#### Source: IATA Safety Report - FY 2022

## **Fatality Risk**



### Industry Fatality Risk All accidents per million sectors

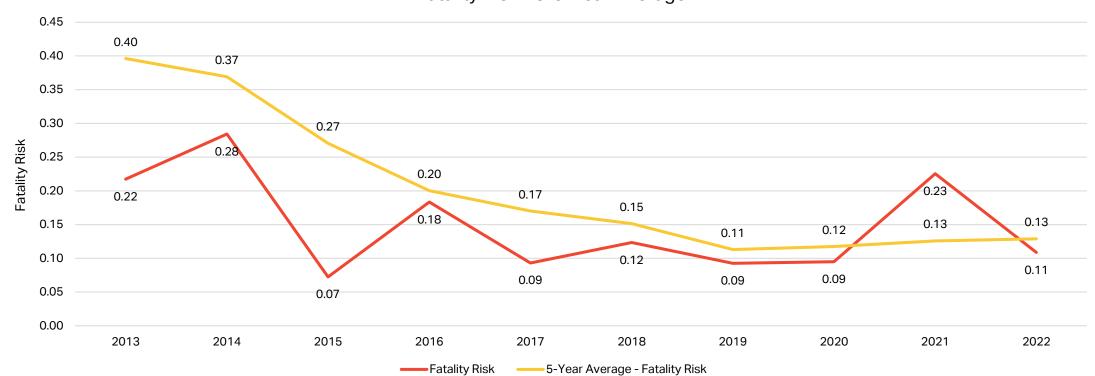


- The industry fatality risk went from 0.23 in 2021 down to 0.11 accidents per million sectors in 2022.
- The fatality risk for IOSAregistered carriers in 2022 was lower than that for non-IOSA carriers (0.06 vs 0.26) and is below the 2022 industry fatality risk of 0.11.



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# Industry Fatality Risk Vs. 5- Year Rolling Average Accidents per million sectors



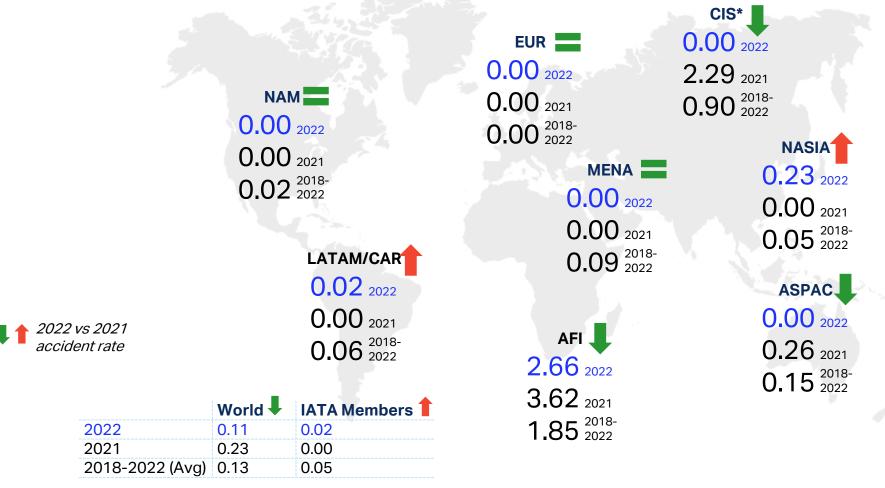
Fatality Risk Vs. 5-Year Average



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### Industry Fatality Risk per Region of Operator 2 Regions have seen an increase in the Fatality Risk

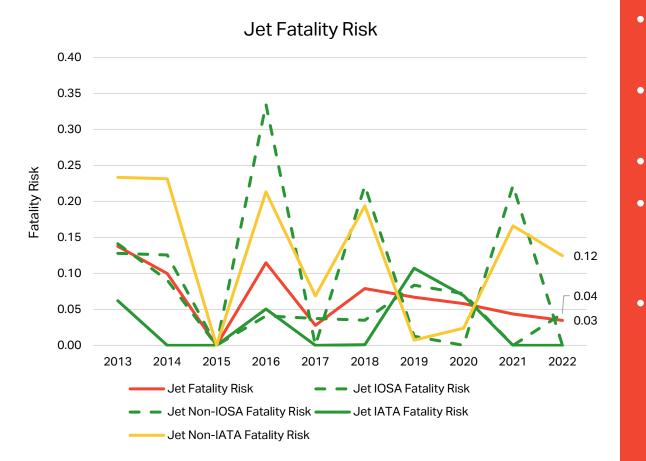


\* CIS sectors may undergo larger revisions than normal once actual flown sectors becomes available – this will affect accident rate as well as fatality risk calculations

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### Industry Jet Fatality Risk

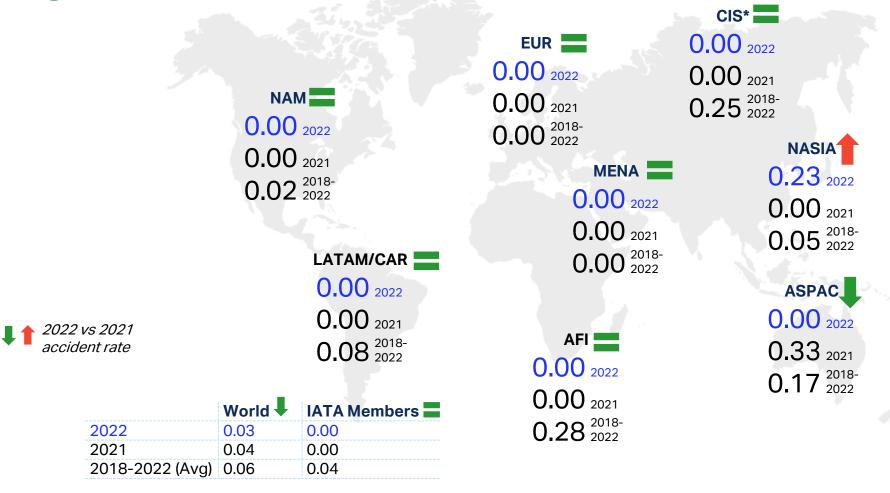


- The jet fatality risk has slightly improved from 0.04 in 2021 down to 0.03 in 2022.
- Zero jet fatality risk for IATA members in 2022.
- 7 Regions had zero jet fatality risk in 2022
- The jet fatality risk for Asia Pacific (ASPAC) operators went from 0.33 in 2021 down to 0.00 in 2022.
- The jet fatality risk for North Asia (NASIA) operators rose from 0.00 in 2021 to 0.23 in 2022.



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### Jet Fatality Risk per Region of Operator 7 Regions had Zero Fatality Risk



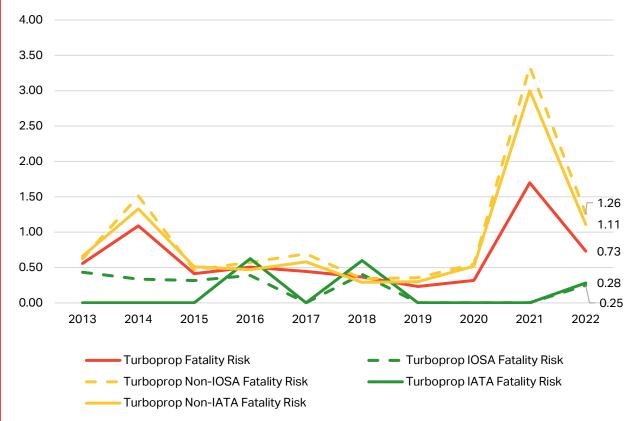
\* CIS sectors may undergo larger revisions than normal once actual flown sectors becomes available – this will affect accident rate as well as fatality risk calculations

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- The turboprop fatality risk went from 1.70 in 2021 down to 0.73 in 2022.
- The turboprop fatality risk for IOSA carriers and IATA members rose from 0.00 in 2021 to 0.25 and 0.28 respectively in 2022.
- 6 Regions had zero turboprop fatality risk in 2022.
- The turboprop fatality risk for Africa (AFI) operators went from 7.15 in 2021 down to 5.74 in 2022.
- The turboprop fatality risk for Commonwealth of Independent States (CIS) operators went from 31.90 in 2021 down to 0.00 in 2022.
- The turboprop fatality risk for Latin America & Caribbean (LATAM/CAR) operators rose from 0.00 in 2021 to 0.17 in 2022.

### **Turboprop Fatality Risk**

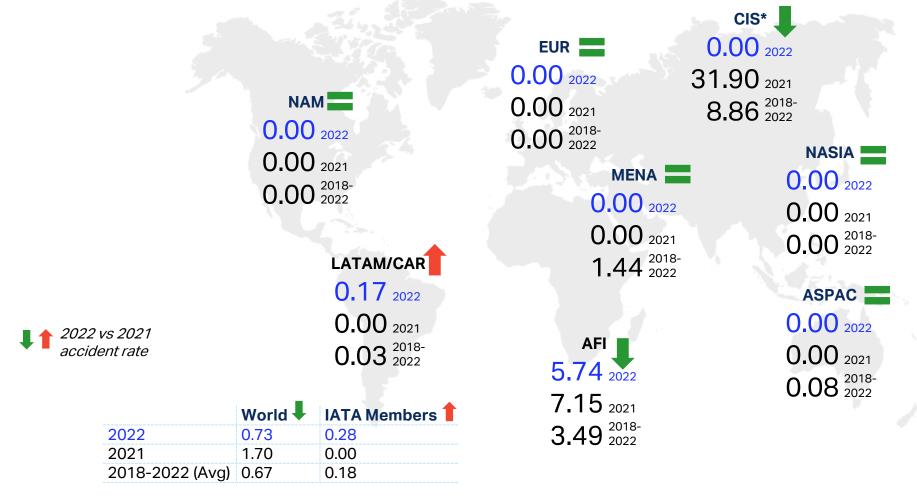


#### Turboprop Fatality Risk



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### Turboprop Fatality Risk per Region of Operator 6 Regions had Zero Fatality Risk



\* CIS sectors may undergo larger revisions than normal once actual flown sectors becomes available – this will affect accident rate as well as fatality risk calculations

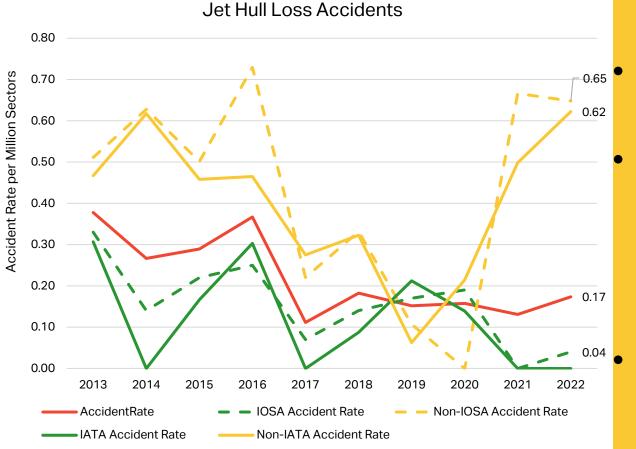
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#### Source: IATA Safety Report - FY 2022

## **Jet and Turboprop Hull Losses**



### Jet Hull Loss Accident Rate All Accidents per million sectors



The jet hull loss accident rate went from 0.13 in 2021 up to 0.17 accidents per million sectors in 2022.

The jet hull loss accident rate for IATA members in 2022 was zero.

The jet hull loss accident rate for IOSA-registered carriers in 2022 was Iower than that for non-IOSA carriers (0.04 vs 0.65) and is below the 2022 industry accident rate of 0.17.

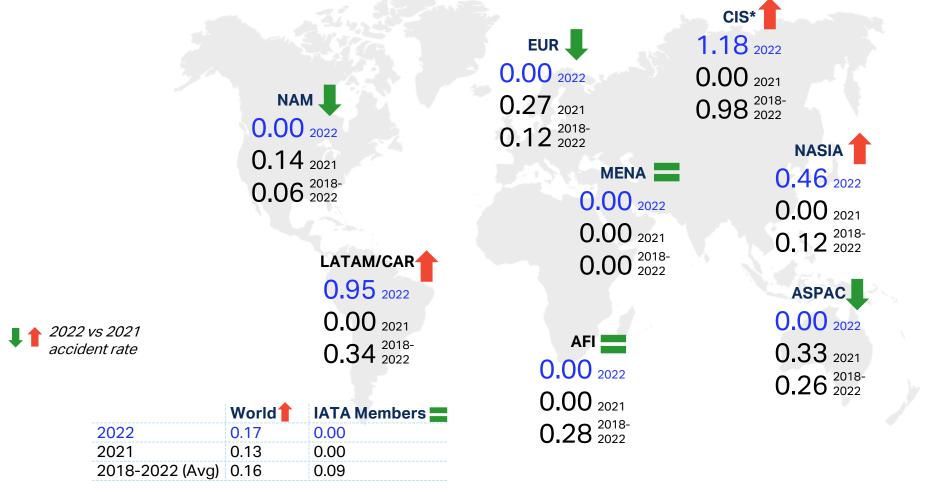
The jet hull loss accident rate for CIS and LATAM/CAR operators went from 0.00 in 2021 up to 1.18 and 0.95 respectively in 2022.

Source: IATA Safety Report – FY 2022

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### Jet Hull Loss per Region of Operator Jet hull loss accident rate is lower or the same in 5/8 Regions

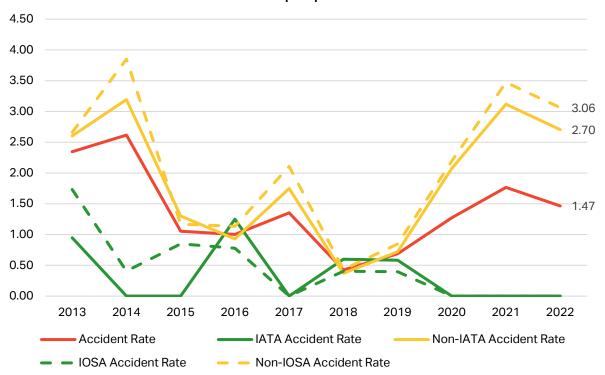


\* CIS sectors may undergo larger revisions than normal once actual flown sectors becomes available – this will affect accident rate as well as fatality risk calculations

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#### Source: IATA Safety Report - FY 2022

### Turboprop Hull Loss Accident Rate All Accidents per million sectors



Turboprop Hull Loss Accidents

- The turboprop hull loss accident rate went from 1.77 in 2021 down to 1.47 accidents per million sectors in 2022.
- Zero turboprop hull Loss accidents for IATA members and IOSA carriers in 2022
- The turboprop hull loss accidents per million sectors went for
  - LATAM/CAR operators from 0.00 in 2021 up to 5.64 in 2022
  - AFI operators from 5.59 in 2021 up to 7.05 in 2022



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### Turboprop Hull Loss per Region of Operator Turboprop hull loss accident rate is lower or the same in 6/8 Regions

CIS\* 0.00 2022 EUR 0.00 2022 42.53 2021 NAM 13.30 2018-2022 0.00 2021 0.00 2022 0.00 2018-2022 0.00 2021 MENA 0.00 2022 0.35 2018-2022 0.00 2022 0.00 2021 0.00 2021 0.00 2018-**1.44**<sup>2018-</sup>2022 LATAM/CAR 5.64 2022 ASPAC 0.00 2022 0.00 2021 2022 vs 2021 AFI 1.86 2018-2022 accident rate 0.00 2021 7.05 2022 0.22 2018-2022 5.59 2021 World IATA Members 4.09 2018-2022 2022 1.47 0.00 2021 1.77 0.00

\* CIS sectors may undergo larger revisions than normal once actual flown sectors becomes available – this will affect accident rate as well as fatality risk calculations

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2018-2022 (Avg) 1.12

0.24

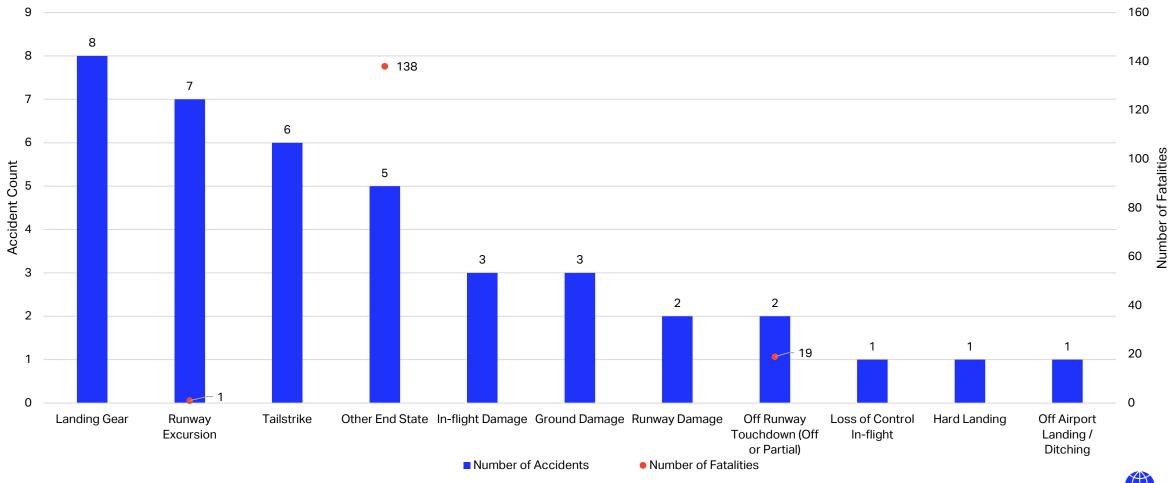
#### Source: IATA Safety Report - FY 2022

## **Accident Categories Overview**



### Industry Accident Count per Accident Category

2022 All Accidents and Fatalities





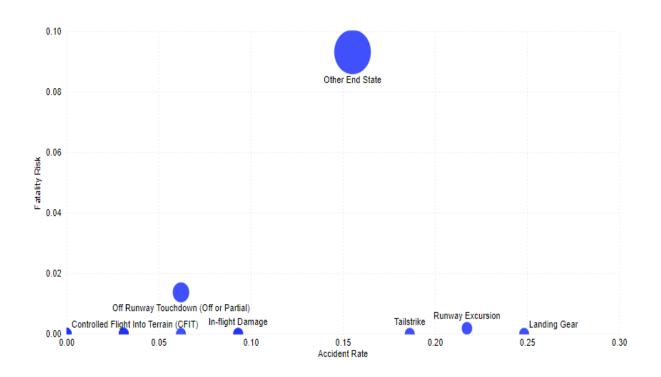
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### Fatality Risk by Accident Category - 2022

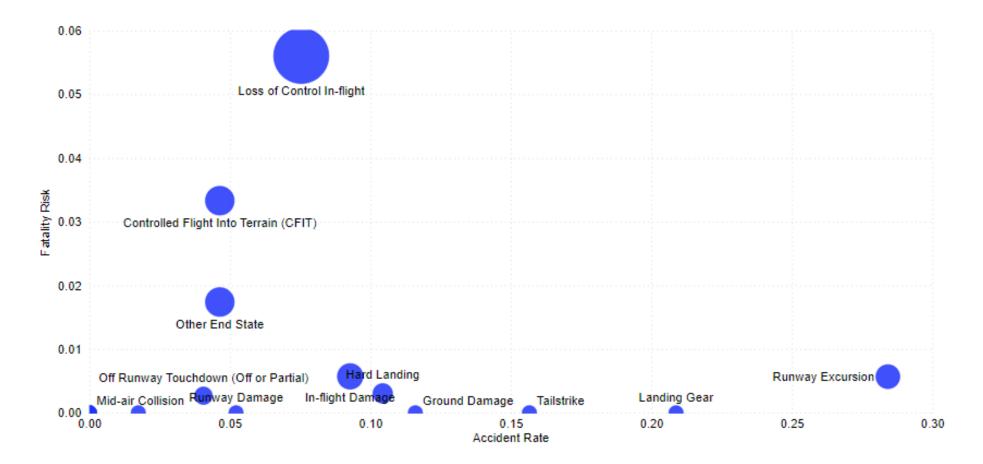
The Other End State is used where:

- Information available at the ACTF meeting was not enough to determine the accident end state. For example:
  - Aircraft is missing,
  - The investigation is still ongoing or report not available and the ACTF is unable to assign an end state classification
- The End State does not fit into other categories





### Fatality Risk by Accident Category – 2018-2022 LOC-I caused the highest fatalities during this period

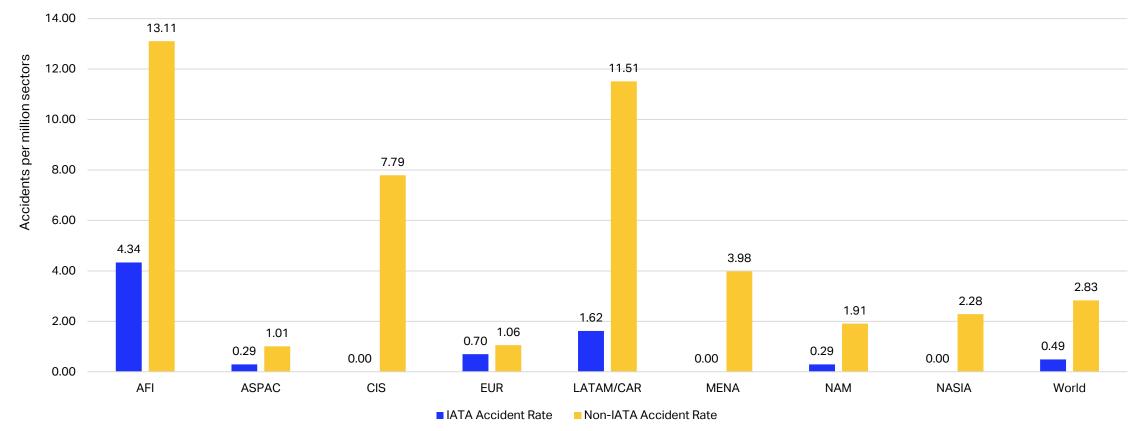


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## IATA / IOSA Accidents



### Industry Accident Rate for IATA Vs. Non-IATA



#### 2022 IATA Vs. Non-IATA Accident Rates



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### Industry Accident Rate for IOSA Vs. Non-IOSA

16.00 Accidents per million sectors 14.53 14.00 11.95 12.00 10.54 10.00 8.00 6.00 4.17 3.95 4.00 2.82 2.24 1.60 2.00 0.69 0.90 0.81 0.86 0.81 0.70 0.48 0.25 0.00 0.00 0.00 AFI CIS ASPAC EUR LATAM/CAR MENA NAM NASIA World IOSA Non-IOSA

2022 IOSA vs. NON-IOSA



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### Industry Accident Rate for IOSA Vs. Non-IOSA

10.00 9.23 9.00 8.00 8.00 Accidents per million sectors 7.00 5.67 6.00 5.00 4.00 3.00 2.64 2.19 2.04 1.91 2.00 1.64 1.53 1.13 1.07 0.97 0.84 0.88 0.65 0.61 1.00 0.39 0.21 0.00 AFI ASPAC CIS EUR MENA NAM NASIA LATAM/CAR World IOSA Non-IOSA

#### 2018-2022 IOSA vs. Non-IOSA



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## List of 2022 Accidents



### List of 2022 Accidents

2022-12-31	NAM	Envoy Air Inc.	E175	Jet	Substantial Damage	0	No	Yes	End State Ground Damage
		Envoy Air inc.	21/3	bet	Substantial Damage	U	NO	163	Ground Damage
2022-12-17	AFI	BLUE BIRD AVIATION LTD	Dash 8-400	Turboprop	Substantial Damage	0	No	No	Off Runway Touchdown (Off or Partial)
2022-11-20	EUR	Blafugl ehf.	B737-400	Jet	Substantial Damage	0	No	No	Ground Damage
2022-11-18	LATAM/CAR	LATAM Airlines Group S.A.	A320neo Passenger	Jet	Substantial Damage	0	Yes	Yes	Runway Damage
2022-11-17	LATAM/CAR	LEAIR CHARTER SERVICES LTD	EMB110 Bandeirante	Turboprop	Substantial Damage	0	No	No	Landing Gear
2022-11-15	NAM	AMERIFLIGHT, INC. (BURBANK, CA)	Metro	Turboprop	Substantial Damage	0	No	No	Other End State
2022-11-06	AFI	Precision Air Services Plc	ATR 42-300	Turboprop	Substantial Damage	19	Yes	Yes	Off Runway Touchdown (Off or Partial)
2022-11-03	AFI	Goma Express	Let L-410	Turboprop	Hull Loss	3	No	No	Other End State
2022-10-23	ASPAC	Korean Air Lines Co. Ltd.	A330-300	Jet	Substantial Damage	0	Yes	Yes	Other End State
2022-10-06	AFI	Ethiopian Airlines Group	B787-9	Jet	Substantial Damage	0	Yes	Yes	Tailstrike
2022-10-01	EUR	Transavia Airlines	B737-800	Jet	Substantial Damage	0	No	Yes	Hard Landing
2022-09-25	LATAM/CAR	Compania Panamena de Aviacion, S.A.	B737-800	Jet	Substantial Damage	0	Yes	Yes	Runway Excursion
2022-09-24	EUR	Swiftair, S.A.	B737-400	Jet	Substantial Damage	0	No	No	Runway Excursion
2022-09-20	LATAM/CAR	Saeta Peru	BAE Jetstream 31	Turboprop	Hull Loss	1	No	No	Runway Excursion
2022-09-19	AFI	Equaflight Service	B1900-C	Turboprop	Substantial Damage	0	No	No	Landing Gear
2022-09-15	LATAM/CAR	AERONAVES TSM, S.A. DE C.V.	Metro	Turboprop	Substantial Damage	0	No	No	Off Airport Landing / Ditching
2022-09-10	AFI	Tracep Congo Aviation	An-28	Turboprop	Hull Loss	3	No	No	Other End State
2022-09-02	EUR	TAP Portugal	A320	Jet	Substantial Damage	0	Yes	Yes	Runway Damage
2022-08-17	CIS	Open Joint Stock Company "Angara	An-24	Turboprop	Substantial Damage	0	No	No	In-flight Damage
2022-08-06	NAM	Delta Air Lines, Inc.	B757-200	Jet	Substantial Damage	0	Yes	Yes	Tailstrike
2022-07-30	ASPAC	Nok Airlines Public Company Limited	B737-800	Jet	Substantial Damage	0	No	No	Runway Excursion
2022-07-18	AFI	Jubba Airways Limited	Fokker 50	Turboprop	Hull Loss	0	No	No	Loss of Control In-flight
2022-06-21	LATAM/CAR	RED AIR	MD-80-82	Jet	Hull Loss	0	No	No	Landing Gear
2022-06-16	AFI	Gomair	B737-300	Jet	Substantial Damage	0	No	No	Landing Gear
2022-05-18	NAM	Frontier Airlines, Inc.	A320	Jet	Substantial Damage	0	No	Yes	Tailstrike
2022-05-12	NASIA	TIBET AIRLINES CO., LTD	A319	Jet	Hull Loss	0	No	No	Runway Excursion
2022-05-07	ASPAC	Jetstar Airways Pty Limited	B787	Jet	Substantial Damage	0	No	Yes	In-flight Damage
2022-05-06	EUR	BLUE AIR AVIATION S.A.	B737-800	Jet	Substantial Damage	0	Yes	Yes	Tailstrike
2022-04-21	LATAM/CAR	Aeromexico	B787	Jet	Substantial Damage	0	Yes	Yes	In-flight Damage
2022-04-14	NAM	Key Lime Air Corporation	Metro	Turboprop	Substantial Damage	0	No	No	Landing Gear
2022-04-08	LATAM/CAR	Aliansa - Aerolineas Andinas	Basler Turbo-67 (BT-67)	Turboprop	Hull Loss	0	No	No	Runway Excursion
2022-04-07	LATAM/CAR	DHL Aero Expreso S.A.	B757-200 Freighter	Jet	Hull Loss	0	No	No	Runway Excursion
2022-03-21	NASIA	China Eastern Yunnan Airlines	B737-800	Jet	Hull Loss	132	No	Yes	Other End State
2022-02-08	EUR	KLM	A330-300	Jet	Substantial Damage	0	Yes	Yes	Tailstrike
2022-02-04	NAM	MN Airlines LLC	B737-800	Jet	Substantial Damage	0	No	Yes	Landing Gear
2022-01-22	NAM	Jetblue Airways Corporation	A320	Jet	Substantial Damage	0	Yes	Yes	Tailstrike
2022-01-08	CIS	Aviastar-TU Co. Aviacompany	Tu-204 / Tu-214	Jet	Hull Loss	0	No	No	Ground Damage
2022-01-05	MENA		B737-400	Jet	Substantial Damage	0	No	No	Landing Gear
2022-01-04	LATAM/CAR	LINEA AEREA NACIONAL DE HONDURAS, S.A. DE C.V. (LANHSA)	BAE Jetstream 31	Turboprop	Substantial Damage	0	No	No	Landing Gear



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