ICAO

SAFETY

Safety Report

2023 Edition

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Note: The ICAO regions based on the Member States accredited to each ICAO Regional Office are used in the report and are listed in Appendix 1. This document focuses primarily on scheduled commercial flights. The scheduled commercial flights data was based on the Official Airline Guide (OAG) combined with internal ICAO preliminary estimates.

Coordinated, Risk-based Approach to Improving Global Aviation Safety

The air transport industry plays a significant role in global economic activity and development. One of the key elements to maintaining the vitality of civil aviation is to ensure safe, secure, efficient and environmentally sustainable operations at the global, regional and national levels.

A specialized agency of the United Nations, the International Civil Aviation Organization (ICAO) was established in 1944 to promote the safe and orderly development of international civil aviation throughout the world.

ICAO promulgates Standards and Recommended Practices (SARPs) to facilitate harmonized regulations in aviation safety, security, efficiency and environmental protection on a global level. Today, ICAO manages over 12 000 SARPs across 19 Annexes and six Procedures for Air Navigation Services (PANS) to the Convention on International Civil Aviation (Chicago Convention), many of which are constantly evolving in tandem with the latest developments and innovations. ICAO also serves as the primary forum for cooperation in all fields of civil aviation among its 193 Member States.

Enhancing global civil aviation safety is ICAO's most fundamental strategic objective. The Organization works constantly to address and enhance global aviation safety through the following coordinated activities:

- Policy and standardization;
- Monitoring of key safety trends and safety performance indicators;
- Specific programmes to address safety issues; and
- Implementation support.

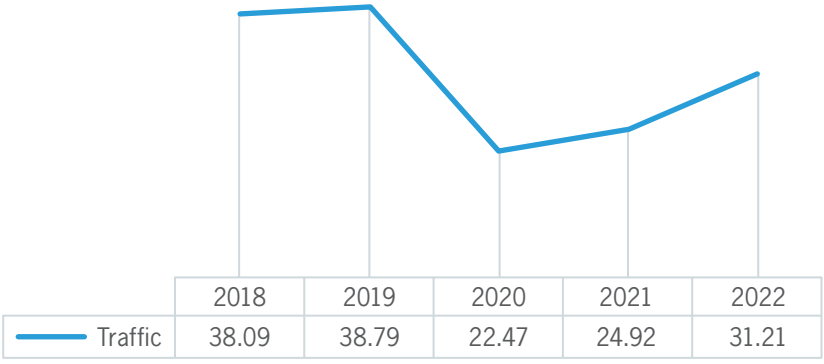
The Global Aviation Safety Plan (GASP, Doc 10004) presents the global strategy for the continuous improvement of aviation safety. The purpose of the GASP is to continually reduce fatalities, and the risk of fatalities, by guiding the development of a harmonized aviation safety strategy.

This edition of the safety report provides accident statistics and analysis for the year 2022. Results of analyses from the 2018–2022 safety reports are used as benchmarks for comparison; however, it should be noted that the data presented in this report may not exactly match earlier editions due to updates made during the intervening period.

Contents

Executive Summary

ICAO reports that global passenger traffic continued to increase in 2022 with 3.2 billion passengers transported worldwide, up from 2.3 billion passengers in 2021. Although still below pre-pandemic (2019) levels by 29 per cent with 4.5 billion passengers having been transported worldwide, passenger traffic increased 78 per cent from the first year of the pandemic (2020) when only 1.8 billion passengers took to the air. As indicated in Chart 1, the number of flight departures for scheduled commercial operations increased by approximately 25 per cent with over 31 million departures in 2022, compared to around 25 million in 2021.



	2018	2019	2020	2021	2022
Traffic	38.09	38.79	22.47	24.92	31.21

Chart 1. | Global traffic of flight departures (million)

Yearly accident statistics indicate an increase in both the total number of accidents as well as the global accident rate in 2022. From 2021 to 2022, there was a 33.3 per cent increase in the total number of accidents, as reported by States. However, it is worth noting that both the global passenger traffic and the number of flight departures increased in 2022 as the pandemic restrictions were lifted and air transport started to recover. The global accident rate of 2.05 accidents per million departures in 2022 increased by 6.3 per cent from the 2021 rate of 1.93 accidents per million departures noting that the flight departures increased around 25 per cent during the same period of time. As defined in ICAO Annex 13 — *Aircraft Accident and Incident Investigation*, the accidents used for these statistics were reviewed, validated and verified by the ICAO Occurrence Validation Study Group (OVSG), and involved scheduled commercial operations of aircraft with a certified maximum take-off weight (MTOW) over 5 700 kg.

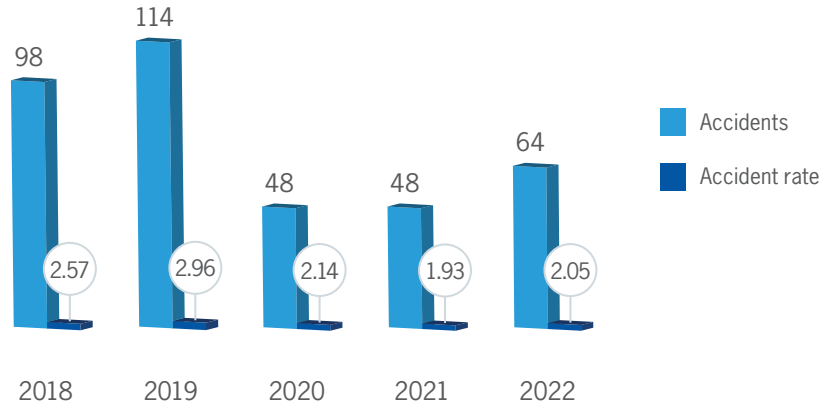


Chart 2. | Accident records: 2018–2022 scheduled commercial operations

In 2022, scheduled commercial air transport accidents resulted in 160 fatalities representing an increase from 104 in 2021, as well as an increase in fatality rate of around 50 people per billion passengers from 45 per billion in 2021. The number of fatal accidents increased from four in 2021 to seven in 2022. Table 1 and Figure 1 show the number of fatal accidents and total fatalities by area of accreditation of ICAO regional office.

ICAO Region	Number of fatal accidents	Total fatalities
Asia and Pacific (APAC)	2	133
Eastern and Southern Africa (ESAF)	1	19
Europe and North Atlantic (EUR/NAT)	Nil	Nil
Middle East (MID)	Nil	Nil
North America, Central America and Caribbean (NACC)	1	1
South America (SAM)	1	2
Western and Central Africa (WACAF)	2	5

Table 1. | Number of fatal accidents and total fatalities by ICAO region in 2022

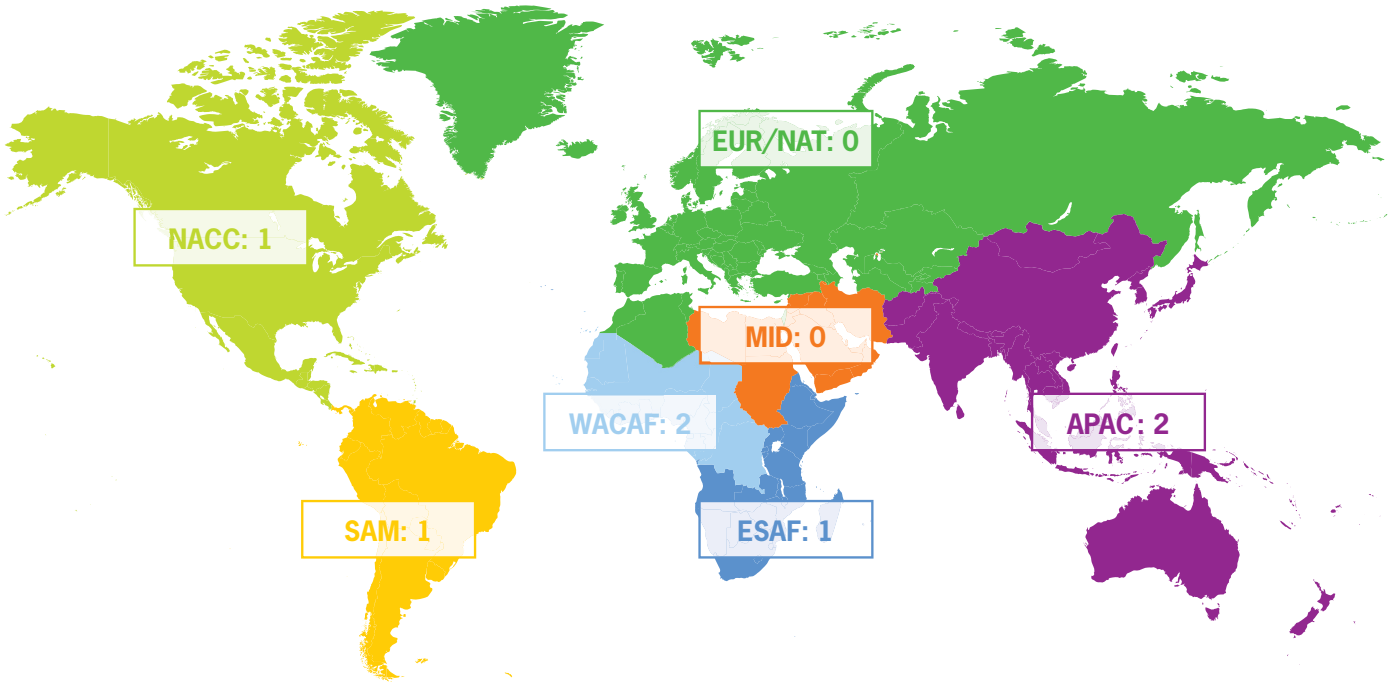


Figure 1. | Number of fatal accidents by ICAO region in 2022

Charts 3 and 4 present data related to accidents of scheduled commercial operations.

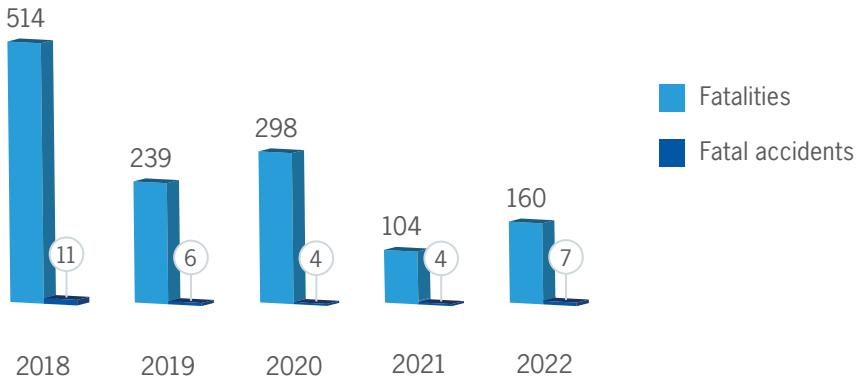


Chart 3. | Fatal accident records: 2018–2022 scheduled commercial operations

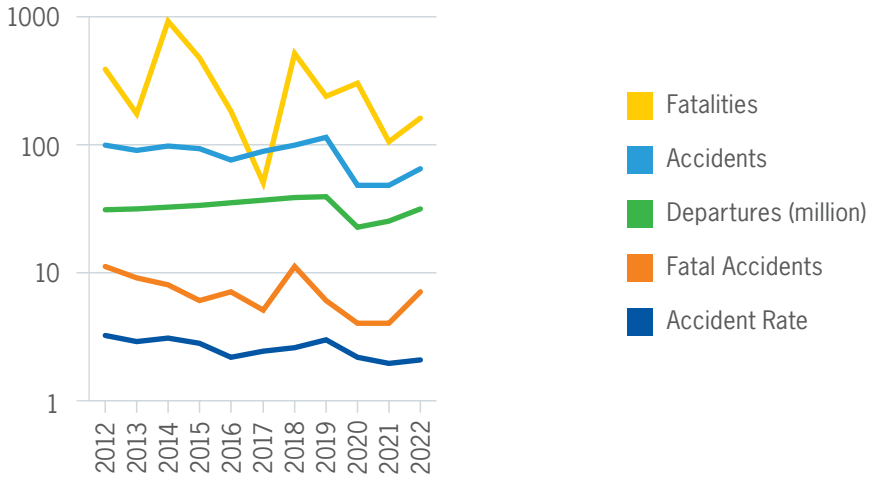


Chart 4. | Historical trends for scheduled commercial operations

The 41st Session of the ICAO Assembly, held from 27 September to 7 October 2022 in Montréal, Canada adopted strategic decisions supporting the future safety, efficiency, security and sustainability of air transport. The Assembly endorsed the 2023–2025 edition of the Global Aviation Safety Plan (GASP) as the global strategic direction for aviation safety.

In response to existing and emerging trends, ICAO is working in partnership with the international aviation community to achieve future safety improvements, with an emphasis on improving safety performance and reducing operational safety risk through the support of standardization, implementation and monitoring. The 2023 edition of the Safety Report provides accident statistics and analyses with reference to the 2018–2022 time period, as well as an update to the GASP indicators linked to Goal 1 and its related target.

More information about the GASP Goals and targets can be found at https://www.icao.int/safety/GASP/Pages/Goals-and-Targets.aspx.

Accident Statistics and Analysis – Scheduled Commercial Air Transport

The safety performance of the GASP is measured by a series of metrics as defined by the GASP indicators set in its 2023–2025 edition. Goal 1 of the GASP is to achieve a continuous reduction of operational safety risks. This reduction is achieved by a series of actions targeting the global high-risk categories of occurrences (G-HRCs). The target associated with this goal (Target 1.1) calls for the decrease of the global accident rate for commercial scheduled operations. Several indicators are linked to this target including number of accidents, fatal accidents and fatalities by State, region or globally, as well as accident rates (i.e. number of occurrences per million departures). GASP indicators also include the percentage of occurrences related to the HRCs.

Overall Safety Performance Indicator – Global Accident Rate

ICAO's global accident rate provides an overall indicator of safety performance for air transport operation. The accident rate is based on scheduled commercial operations involving fixed-wing aircraft with a certified MTOW over 5 700 kg. Aircraft accidents are reviewed and validated by the ICAO Occurrence Validation Study Group (OVSG) using definitions provided in Annex 13 — *Aircraft Accident and Incident Investigation*.

Data on departures is collated by ICAO's Air Transport Bureau and comprises scheduled commercial operations that involve the transportation of passengers, cargo and mail for remuneration. Estimates are made where data has not been provided by States, and as new data is provided to ICAO, it will be incorporated into the database. It is worth noting that this may cause slight changes to the calculated rates from year to year.

Chart 5 below shows the global accident rate trend (per million departures) over the previous five years, with 2022 having an accident rate of 2.05 accidents per million departures, an increase of 6.3 per cent from the previous year.

Scheduled commercial accidents in 2022 are listed in Appendix 2.

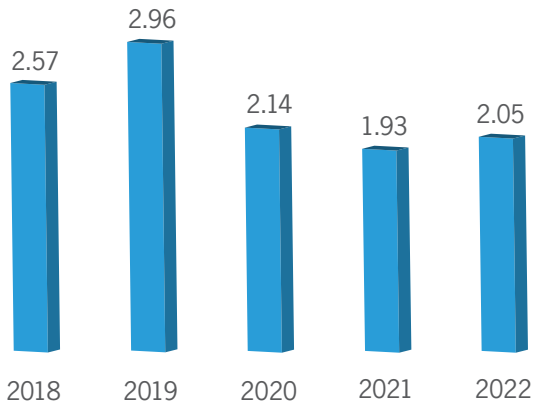


Chart 5. | Global accident rates (accidents per million departures)

Accident and Fatality Trend

The number of worldwide accidents and fatal accidents on scheduled commercial flights during the 2018–2022 period are shown in Chart 6.

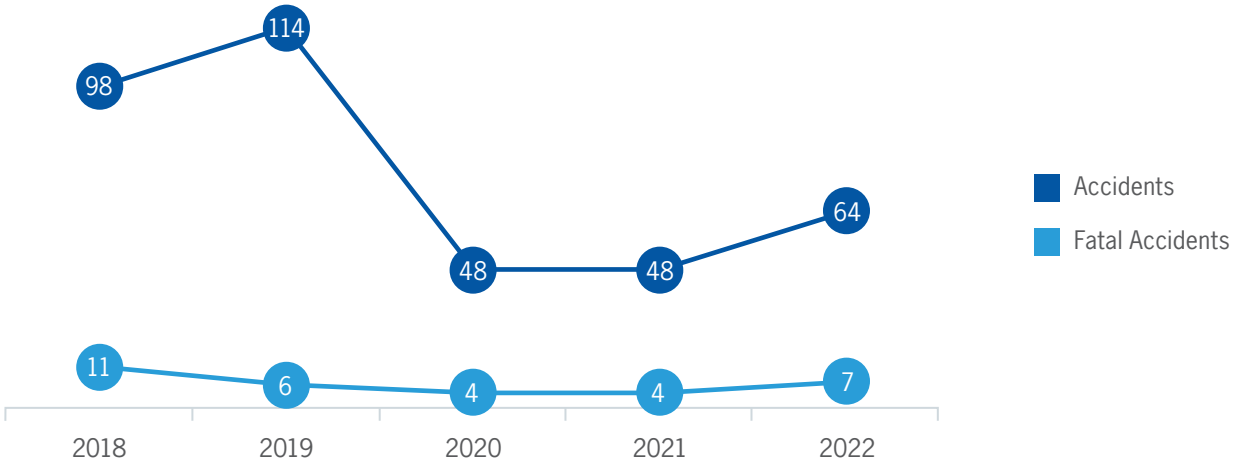


Chart 6. | Accident trend (2018–2022)

Between the years 2018 to 2022, the trend of the annual number of accidents decreased. The highest count recorded within this period was in 2019, with 114 accidents. The number of accidents significantly decreased in both 2020 and 2021; however, it is worth noting that during this time there was a significant decrease in traffic of passengers and flights due to measures placed by governments aimed at minimizing the spread of COVID-19. In 2022, as the pandemic restrictions were lifted and air transport started to recover, the traffic increased as well as the number of accidents and fatal accidents. Chart 7 shows the number of fatalities associated with the afore-mentioned fatal accidents increased from 104 in 2021 to 160 in 2022.

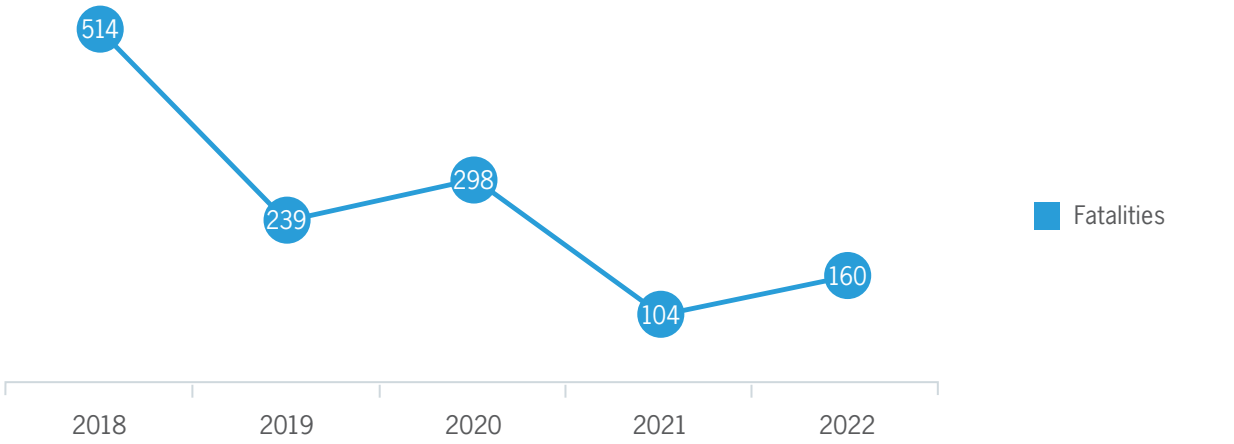


Chart 7. | Fatalities trend (2018–2022)

Accidents Overview by Occurrence Category

ICAO Member States are required to report accidents and serious incidents in accordance with Annex 13 through the ICAO Accident/Incident Data Reporting (ADREP) system. The OVSG validates and categorizes the accidents for scheduled and non-scheduled commercial operations involving aircraft with a certified MTOW over 5 700 kg using the Commercial Aviation Safety Team (CAST)/ICAO Common Taxonomy Team (CICTT) taxonomy for occurrence categories. Detailed information about the CICTT occurrence categories can be found in Appendix 2.

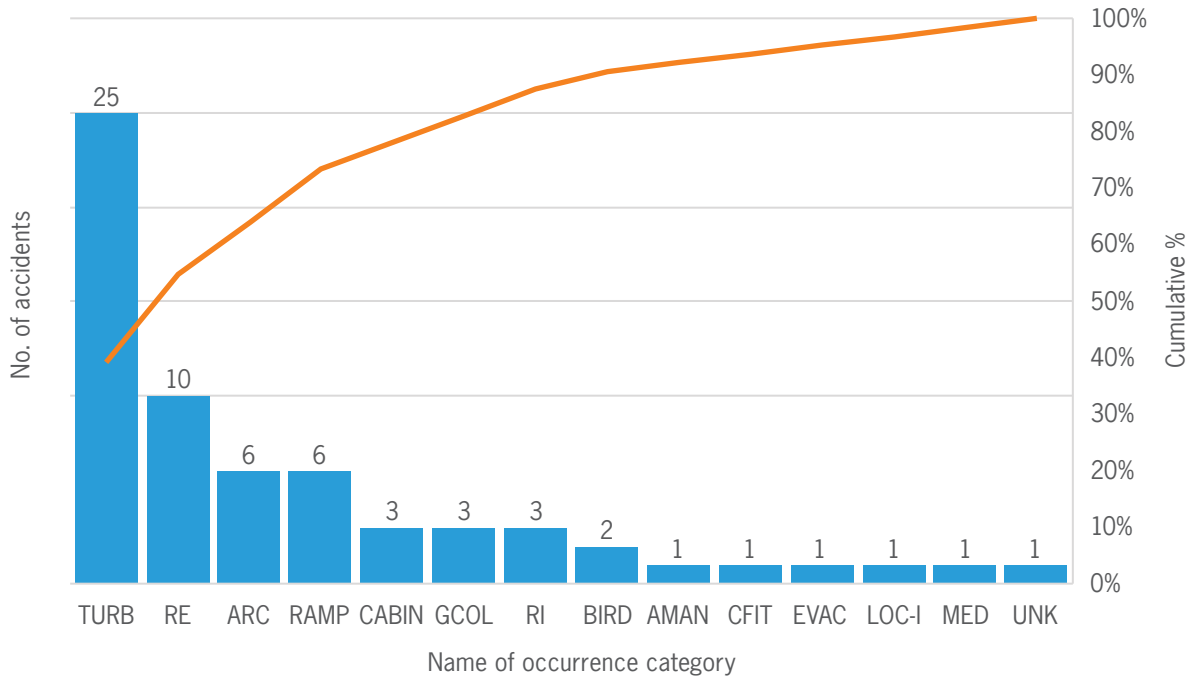


Chart 8. | Total accidents by occurrence category in 2022

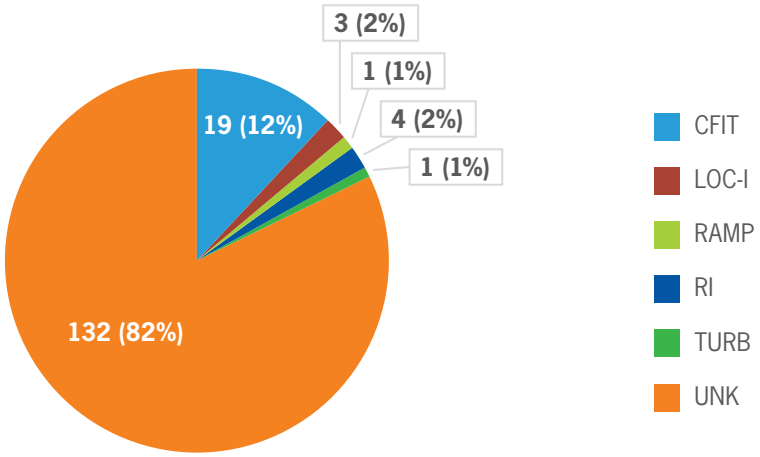


Chart 9. | Total fatalities by occurrence category in 2022

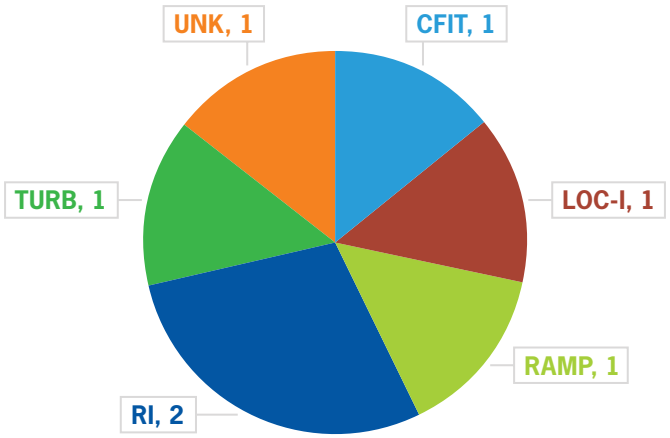


Chart 10. | Total fatal accidents by occurrence category in 2022

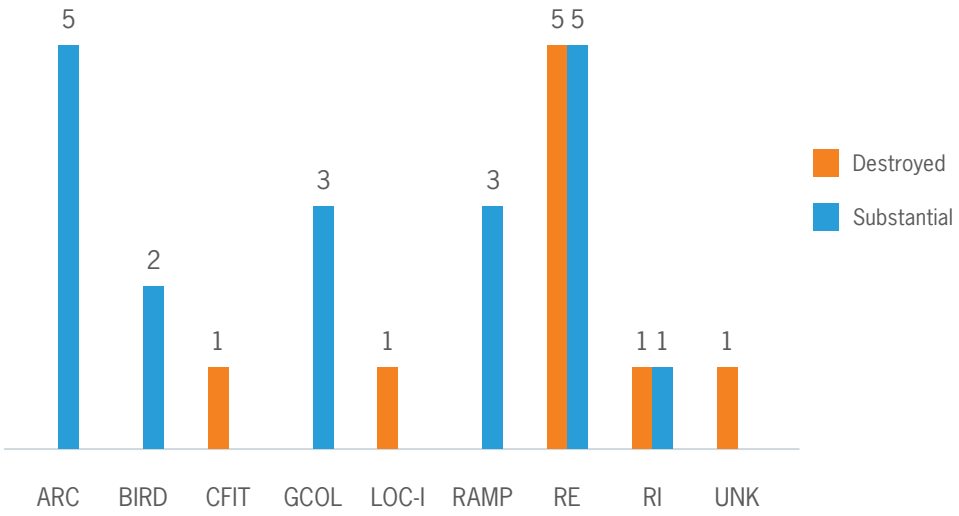


Chart 11. | Aircraft damage by occurrence category in 2022

Charts 8 to 11 provide an overview of the accidents in 2022 for scheduled commercial operations by CICTT occurrence categories. Chart 8 indicates that the turbulence encounter (TURB) occurrence category accounted for the most accidents followed by runway excursion (RE) related accidents. The cumulative line indicates the total percentage of accidents as the occurrence categories added from left to right, i.e. the total number of accidents related to TURB and RE represented more than half of total accidents in 2022. The seven fatal accidents fall into six categories: one controlled flight into or toward terrain (CFIT) accident, with 19 fatalities and one aircraft destroyed; one loss of control in-flight (LOC-I) accident, resulting in 3 fatalities and one aircraft destroyed; one involving ground handling (RAMP) causing

one death; two related to runway incursion (RI) causing four fatalities and one aircraft destroyed; one related to turbulence (TURB) resulting in one fatality; and one unknown or undetermined (UNK) causing 132 fatalities and one aircraft destroyed. There were ten accidents related to runway excursion (RE) causing ten aircraft substantially damaged or destroyed. Moreover, the accidents that caused substantial damage to the aircraft involved the following six occurrence categories: abnormal runway contact (ARC); bird strike (BIRD); ground collision (GCOL); ground handling (RAMP); runway incursion (RI) and undershoot or overshoot (USOS).

Note 1: The statistics for this section are based on the primary occurrence category of the accident if a series of categories were identified for this accident by the OVSG.

Note 2: The accident categorized as UNK will be updated in the future edition of safety report once the relevant information becomes available.

Global High-risk Categories of Occurrence

In the GASP, ICAO identifies a series of global high-risk categories of occurrences (G-HRCs) that should be addressed to mitigate the risk of fatalities.

Based on actual fatalities, high fatality risk per accident or the number of accidents and incidents, as well as results from the analysis of safety data collected from proactive and reactive sources of information from ICAO and other non-governmental organizations, ICAO has identified five G-HRCs as global safety priorities in the 2023–2025 edition of the GASP:

- controlled flight into terrain (CFIT);
- loss of control in-flight (LOC-I);
- mid-air collision (MAC);
- runway excursion (RE); and
- runway incursion (RI).

Chart 12 below shows that in 2022, the five G-HRCs for scheduled commercial air transport operations represented 16.3 per cent of all fatalities, 57.1 per cent of fatal accidents, 23.4 per cent of the total number of accidents and 50 per cent of the accidents that destroyed or caused substantial damage to aircraft.

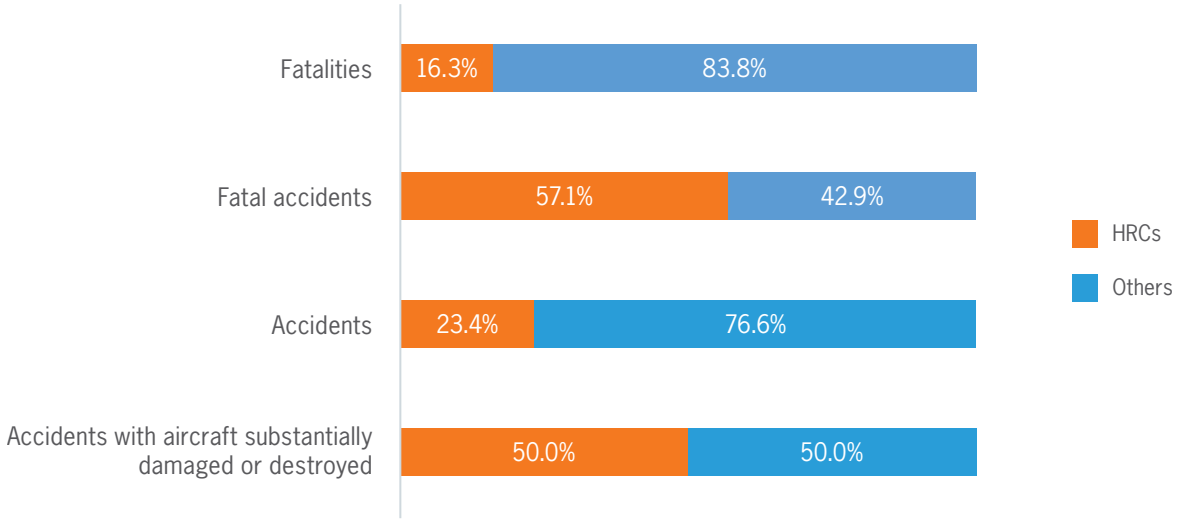


Chart 12. | G-HRCs accident distribution in 2022

A breakdown of the five G-HRCs and the respective distribution of accidents, fatal accidents and fatalities which occurred in 2022 are listed below and illustrated in Chart 13.

- One accident related to CFIT accounting for 14.3 per cent of total fatal accidents and 11.9 per cent of total fatalities.
- One accident related to LOC-I accounting for 14.3 per cent of total fatal accidents and 1.9 per cent of total fatalities.
- Three accidents related to RI accounting for 28.6 per cent of total fatal accidents and 2.5 per cent of total fatalities.
- Ten RE related accidents accounted for 15.6 per cent of total accidents which resulted in the involved aircrafts substantially damaged or destroyed.
- There was no accident related to MAC for scheduled commercial operations involving aircraft with a certified MTOW over 5 700 kg.

It is worth noting that there was one fatal accident categorized as unknown or undetermined (UNK) that accounted for 82 per cent of total fatalities in 2022. The categorization will be updated once the relevant information becomes available.

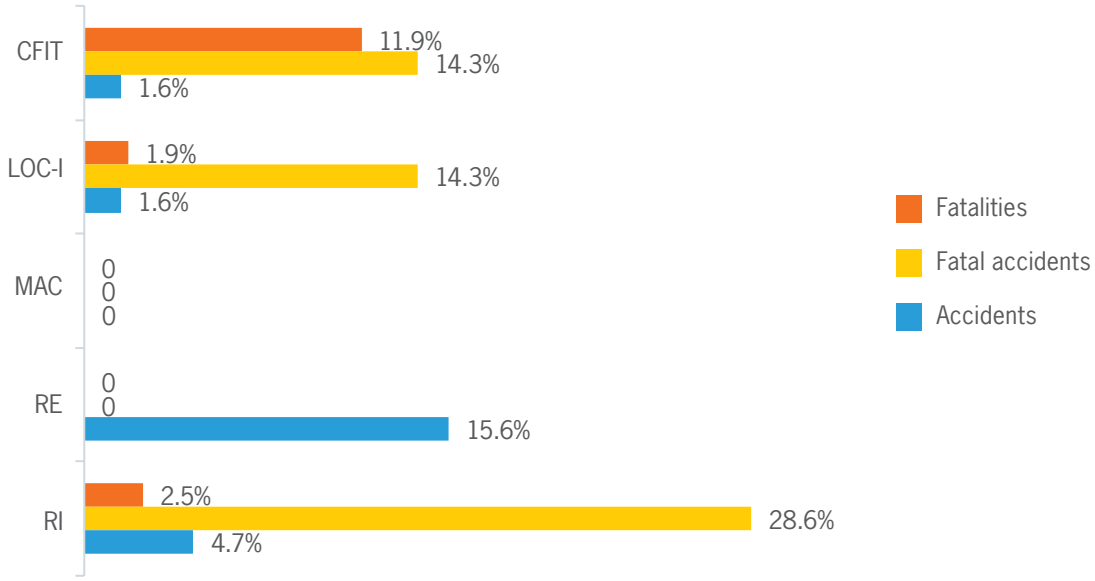


Chart 13. | G-HRCs accident overview for 2022

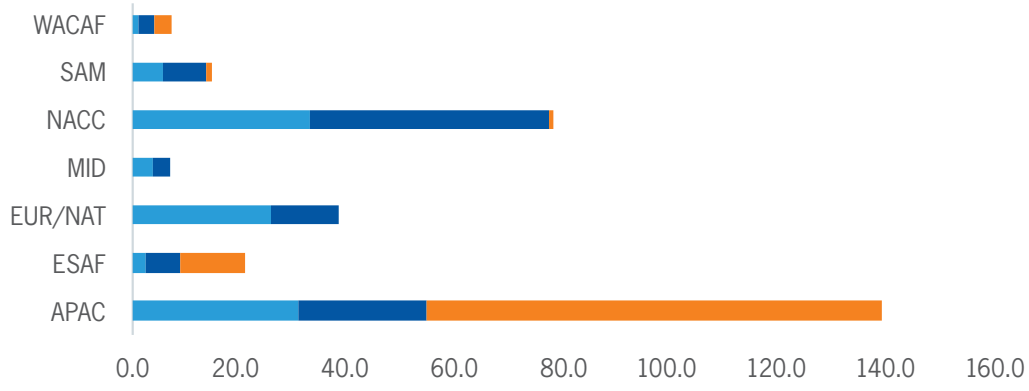
Regional Accident Statistics

To further analyze the state of aviation safety, the accident data for scheduled commercial air transport operations is categorized according to ICAO region based on the Member States accredited to each ICAO regional office, by State of Occurrence. Table 2 and Chart 14 provide details on the state of aviation safety in different regions for 2022 in the context of global outcomes. The States included in each ICAO region used in this report can be found in Appendix 1.

ICAO Region	Estimated departures	Number of accidents	Accident rate (per million departures)	Fatal accidents	Fatalities
APAC	9 445 233	15	1.59	2	133
ESAF	710 630	4	5.63	1	19
EUR/NAT	7 838 023	8	1.02	-	-
MID	1 163 085	2	1.72	-	-
NACC	10 100 395	28	2.77	1	1
SAM	1 687 796	5	2.96	1	2
WACAF	261 169	2	7.66	2	5
World	31 206 331	64	2.05	7	160

Table 2. | Departures, accidents and fatalities by ICAO region based on State of Occurrence in 2022

It is worth noting that these statistics are based on ADREP data reported by the State of Occurrence in 2022. Partly due to the small number of departures, some regions experience a large fluctuation in the accident rate from year to year. For this reason, these numbers should be considered in relation to the total number of accidents to gain an overall perspective.



	APAC	ESAF	EUR/NAT	MID	NACC	SAM	WACAF
Traffic (%)	30.3	2.3	25.1	3.7	32.4	5.4	0.8
Accidents (%)	23.4	6.3	12.5	3.1	43.8	7.8	3.1
Fatalities (%)	83.1	11.9	0.0	0.0	0.6	1.3	3.1

Chart 14. | Share of traffic, accidents and fatalities by ICAO region based on State of Occurrence in 2022

Accidents by ICAO Region

Chart 15 shows the percentage of accidents and related fatalities for each ICAO region based on State of Occurrence for scheduled commercial operations in 2022. States included in each region are listed in Appendix 1.

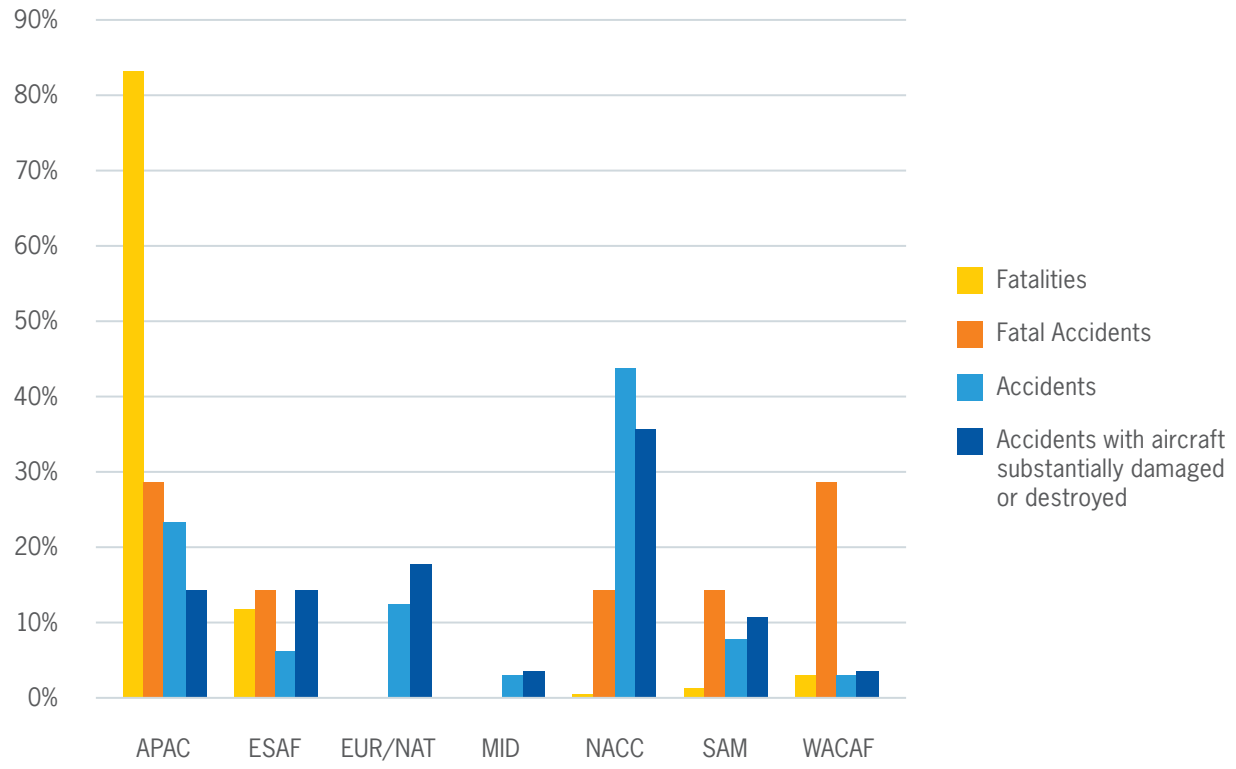


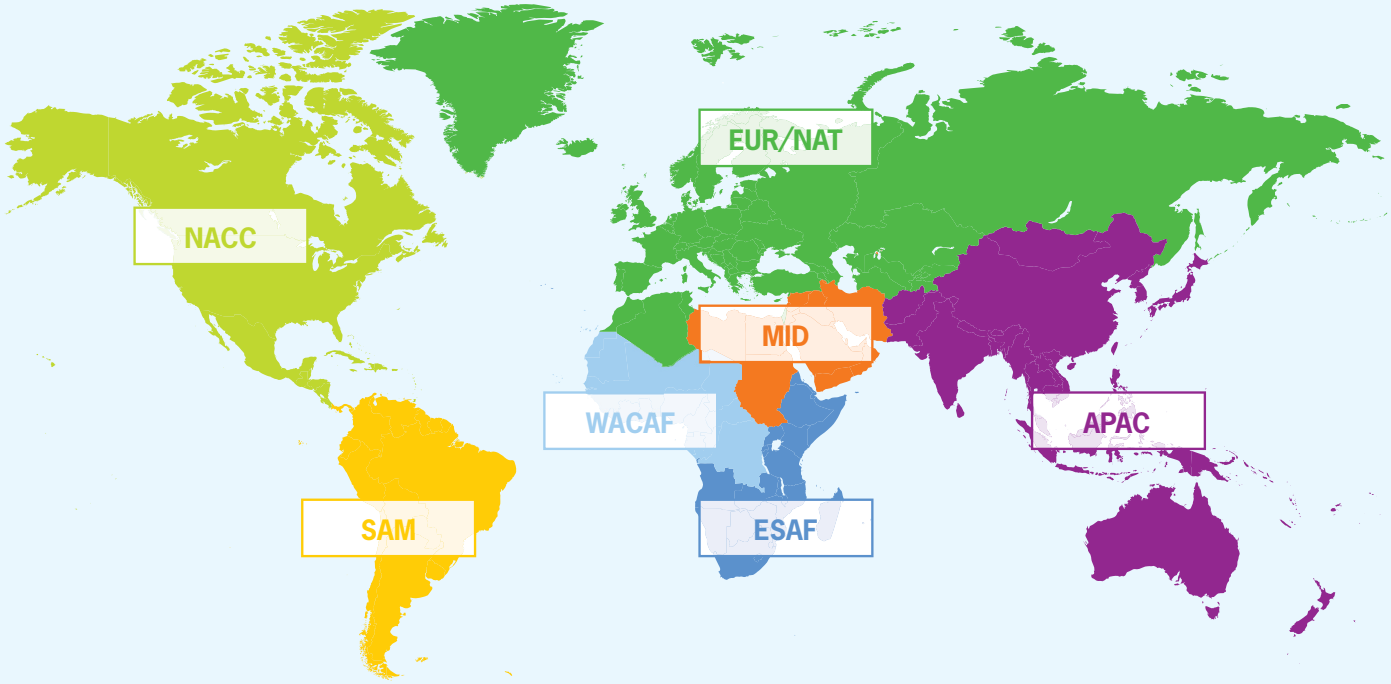
Chart 15. | Accident overview by ICAO region in 2022

In 2022, for scheduled commercial operations involving aircraft with a certified MTOW over 5 700 kg, the European and North Atlantic (EUR/NAT) Region and the Middle East (MID) Region did not experience fatal accidents. Two fatal accidents occurred in the Asia Pacific (APAC) Region, accounting for over 83 per cent of the total fatalities. The Eastern and Southern African (ESAF) Region, North American, Central American and Caribbean (NACC) Region and the South American (SAM) Region each experienced one fatal accident, collectively resulting in approximately 14 per cent of the total fatalities. Two fatal accidents occurred in the Western and Central African (WACAF) Office Region, which accounted for approximately 3 per cent of the total fatalities.

Appendix 1

ICAO Regions

The ICAO Regions used for statistics in this report are based on the Member States accredited to each ICAO regional office. ICAO maintains seven regional offices to provide closer support and coordination for Member States: Asia and Pacific (APAC) Office; Eastern and Southern African (ESAF) Office; European and North Atlantic (EUR/NAT) Office; Middle East (MID) Office; North American, Central American and Caribbean (NACC) Office; South American (SAM) Office; and Western and Central African (WACAF) Office. More information about ICAO regional offices can be found at www.icao.int/secretariat/RegionalOffice/Pages/default.aspx.



APAC (39)

Afghanistan
Australia
Bangladesh
Bhutan
Brunei Darussalam
Cambodia
China
Cook Islands
Democratic People's Republic of Korea
Fiji
India
Indonesia
Japan
Kiribati
Lao People's Democratic Republic
Malaysia
Maldives
Marshall Islands
Micronesia (Federated States of)
Mongolia
Myanmar
Nauru
Nepal
New Zealand
Pakistan
Palau
Papua New Guinea
Philippines
Republic of Korea
Samoa
Singapore
Solomon Islands
Sri Lanka
Thailand
Timor-Leste
Tonga
Tuvalu
Vanuatu
Viet Nam

Appendix 1

ESAF (24)

- Angola
- Botswana
- Burundi
- Comoros
- Djibouti
- Eritrea
- Eswatini
- Ethiopia
- Kenya
- Lesotho
- Madagascar
- Malawi
- Mauritius
- Mozambique
- Namibia
- Rwanda
- Seychelles
- Somalia
- South Africa
- South Sudan
- Uganda
- United Republic of Tanzania
- Zambia
- Zimbabwe

EUR/NAT (56)

- Albania
- Algeria
- Andorra
- Armenia
- Austria
- Azerbaijan
- Belarus
- Belgium
- Bosnia and Herzegovina
- Bulgaria
- Croatia
- Cyprus
- Czechia
- Denmark
- Estonia
- Finland
- France
- Georgia
- Germany
- Greece
- Hungary
- Iceland
- Ireland
- Israel
- Italy
- Kazakhstan
- Kyrgyzstan
- Latvia
- Lithuania
- Luxembourg
- Malta
- Monaco
- Montenegro
- Morocco
- Netherlands
- North Macedonia
- Norway
- Poland
- Portugal
- Republic of Moldova
- Romania
- Russian Federation
- San Marino
- Serbia
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- Tajikistan
- Tunisia
- Türkiye
- Turkmenistan
- Ukraine
- United Kingdom
- Uzbekistan

MID (15)

- Bahrain
- Egypt
- Iran (Islamic Republic of)
- Iraq
- Jordan
- Kuwait
- Lebanon
- Libya
- Oman
- Qatar
- Saudi Arabia
- Sudan
- Syrian Arab Republic
- United Arab Emirates
- Yemen

NACC (22)

- Antigua and Barbuda
- Bahamas
- Barbados
- Belize
- Canada
- Costa Rica
- Cuba
- Dominica
- Dominican Republic
- El Salvador
- Grenada
- Guatemala
- Haiti
- Honduras
- Jamaica
- Mexico
- Nicaragua
- Saint Kitts and Nevis
- Saint Lucia
- Saint Vincent and the Grenadines
- Trinidad and Tobago
- United States

Appendix 1

SAM (13)				
Argentina	Brazil	Ecuador	Paraguay	Uruguay
Bolivia (Plurinational State of)	Chile	Guyana	Peru	Venezuela (Bolivarian Republic of)
	Colombia	Panama	Suriname	

WACAF (24)				
Benin	Chad	Gabon	Mali	Senegal
Burkina Faso	Congo	Gambia	Mauritania	Sierra Leone
Cameroon	Côte d'Ivoire	Ghana	Niger	Togo
Cabo Verde	Democratic Republic of the Congo	Guinea-Bissau	Nigeria	
Central African Republic	Equatorial Guinea	Guinea	Sao Tome and Principe	
		Liberia		

Appendix 2

List of accidents involving scheduled commercial operations of aircraft with a certified MTOW over 5 700 kg in 2022

Local date	Manufacturer/model	State of Occurrence	ICAO region	Fatalities	Occurrence category
2022-01-03	BAE Jetstream 41	South Africa	ESAF		BIRD
2022-01-04	BAE Jetstream 31	Honduras	NACC		RE
2022-01-05	Boeing 737-400	Iran, Islamic Republic of	MID		SCF-NP, RE, EVAC
2022-01-16	Airbus A320-200	Japan	APAC		TURB
2022-01-22	Airbus A320-200	United States	NACC		ARC, AMAN, RI
2022-02-15	ATR42-500	Japan	APAC		TURB
2022-03-03	Boeing 737-800	Spain	EUR/NAT		RAMP
2022-03-12	BEECH 1900D	Panama	SAM		RAMP, SCF-NP
2022-03-21	Boeing 737-800	China	APAC	132	UNK
2022-03-26	Boeing 767-300	Japan	APAC		TURB
2022-04-07	Boeing 757-200	Costa Rica	NACC		RE
2022-04-26	Boeing 737-800	Spain	EUR/NAT		RAMP
2022-05-01	Boeing 737-800	India	APAC	1	TURB
2022-05-06	Boeing 737-800	Italy	EUR/NAT		ARC
2022-05-12	Airbus A319-100	China	APAC		RE, F-POST, EVAC
2022-05-21	Boeing 737-700	United States	NACC		CABIN
2022-05-25	Airbus A320-200	United States	NACC		TURB
2022-05-28	Boeing 787-9	Pakistan	APAC		TURB
2022-06-07	Airbus A310-300	Iran, Islamic Republic of	MID		TURB
2022-06-10	Boeing 737-8	United States	NACC		TURB
2022-06-17	Boeing 777-200	United States	NACC		GCOL
2022-06-21	Boeing MD80	United States	NACC		ARC, RE, F-POST, EVAC, SCF-NP
2022-06-23	Airbus A320-200	Japan	APAC		CABIN

Appendix 2

Local date	Manufacturer/model	State of Occurrence	ICAO region	Fatalities	Occurrence category
2022-06-25	De Havilland DHC8-400	Japan	APAC		TURB
2022-07-01	Boeing 737-700	United States	NACC		ARC
2022-07-16	Boeing 737-800	Japan	APAC		TURB
2022-07-18	Fokker50	Somalia	ESAF		ARC, WSTRW, LOC-I, F-POST, RE
2022-07-20	Airbus A321-200	Hungary	EUR/NAT		EVAC
2022-07-25	Boeing 717-200	Canada	NACC		RAMP
2022-07-25	Airbus A320-200	Colombia	SAM		AMAN
2022-07-30	Boeing 737-800	Thailand	APAC		RE
2022-08-06	Boeing 757-200	United States	NACC		ARC
2022-08-17	ANTONOV An-24	Russian Federation	EUR/NAT		ARC
2022-08-19	Boeing 737-800	United States	NACC		TURB
2022-08-29	Boeing 717-200	United States	NACC		TURB
2022-09-01	Boeing 737-800	United States	NACC		TURB
2022-09-02	Airbus A320-200	Guinea	WACAF	2	RI
2022-09-04	Airbus A220-100	United States	NACC		TURB
2022-09-11	Boeing 737-800	United States	NACC		GCOL
2022-09-24	Boeing 737-400	France	EUR/NAT		RE
2022-09-25	Boeing 737-800	Panama	SAM		RE
2022-09-25	Fokker 50	Somalia	ESAF		RAMP, GCOL
2022-09-29	Boeing 737-700	United States	NACC		TURB
2022-10-01	Boeing 737-800	France	EUR/NAT		ARC
2022-10-03	Boeing 737-800	Japan	APAC		TURB
2022-10-05	ATR42-500	Greece	EUR/NAT		GCOL
2022-10-18	Airbus A320-200	Canada	NACC		MED
2022-10-19	De Havilland DHC 8-300	Canada	NACC		ARC
2022-10-23	Airbus A330-300	Philippines	APAC		RE, USOS
2022-11-02	Airbus A319-100	United States	NACC		TURB

Appendix 2

Local date	Manufacturer/model	State of Occurrence	ICAO region	Fatalities	Occurrence category
2022-11-03	Let L410-UVP E20	Congo, Democratic Republic of the	WACAF	3	LOC-I
2022-11-06	ATR42-500	Tanzania	ESAF	19	CFIT
2022-11-07	ATR72-200	Japan	APAC		CABIN
2022-11-10	Boeing 737-8	United States	NACC		TURB
2022-11-18	Airbus A320-200	Peru	SAM	2	RI, ADRM, F-POST
2022-11-19	Airbus A320-200	United States	NACC		BIRD
2022-11-28	Airbus A330-200	Brazil	SAM		TURB
2022-11-29	Boeing 737-700	United States	NACC		TURB
2022-12-03	Embraer ERJ 170-200	United States	NACC		TURB
2022-12-08	Boeing 767-300	United States	NACC		TURB
2022-12-18	Airbus A330-200	United States	NACC		TURB
2022-12-18	Boeing 737-800	Guatemala	NACC		TURB
2022-12-20	Boeing 787-9	Japan	APAC		TURB
2022-12-31	Embraer ERJ 170-200	United States	NACC	1	RAMP

CICTT Aviation Occurrence Categories (December 2017)

Code	Description
ADRM	**Aerodrome:** Occurrences involving Aerodrome design, service, or functionality issues.
AMAN	**Abrupt maneuver:** The intentional abrupt maneuvering of the aircraft by the flight crew.
ARC	**Abnormal runway contact:** Any landing or takeoff involving abnormal runway or landing surface contact.
ATM	**ATM/CNS:** Occurrences involving Air Traffic Management (ATM) or Communication, Navigation, Surveillance (CNS) service issues.
BIRD	**Bird:** Occurrences involving collisions/near collisions with bird(s).
CABIN	**Cabin safety events:** Miscellaneous occurrences in the passenger cabin of transport category aircraft.
CFIT	**Controlled flight into/towards terrain:** In-flight collision or near collision with terrain, water, or obstacle without indication of loss of control.
CTOL	**Collision with obstacles during takeoff and landing:** Collision with obstacle(s) during takeoff or landing while airborne.
EVAC	**Evacuation:** Occurrence in which either, (a) a person(s) was/were injured during an evacuation, (b) an unnecessary evacuation was performed, (c) evacuation equipment failed to perform as required, or (d) the evacuation contributed to the severity of the occurrence.
EXTL	**External load related occurrence:** Occurrences during or as a result of external load or external cargo operations.
FUEL	**Fuel related:** One or more powerplants experienced reduced or no power output due to fuel exhaustion, fuel starvation/mismanagement, fuel contamination/wrong fuel, or carburetor and/or induction icing.
F-NI	**Fire/smoke (non-impact):** Fire or smoke in or on the aircraft, in flight, or on the ground, which is not the result of impact.
F-POST	**Fire/smoke (post-impact):** Fire/Smoke resulting from impact.

Code	Description
GCOL	**Ground collision:** Collision while taxiing to or from a runway in use.
GTOW	**Glider towing related events:** Premature release, inadvertent release or non-release during towing, entangling with towing, cable, loss of control, or impact into towing aircraft/winch.
ICE	**Icing:** Accumulation of snow, ice, freezing rain, or frost on aircraft surfaces that adversely affects aircraft control or performance.
LALT	**Low altitude operations:** Collision or near collision with obstacles/objects/terrain while intentionally operating near the surface (excludes takeoff or landing phases).
LOC-I	**Loss of control in-flight:** Loss of aircraft control while, or deviation from intended flightpath, in flight. Loss of control inflight is an extreme manifestation of a deviation from intended flightpath. The phrase "loss of control" may cover only some of the cases during which an unintended deviation occurred.
LOC-G	**Loss of control-ground:** Loss of aircraft control while the aircraft is on the ground.
LOLI	**Loss of lifting conditions enroute:** Landing en route due to loss of lifting conditions.
MAC	**Airprox/ ACAS alert/ loss of separation/ (near) mid-air collisions:** Air proximity issues, Traffic Collision Avoidance System (TCAS)/Airborne Collision Avoidance System (ACAS) alerts, loss of separation as well as near collisions or collisions between aircraft in flight.
MED	**Medical:** Occurrences involving illnesses of persons on board an aircraft.
NAV	**Navigation errors:** Occurrences involving the incorrect navigation of aircraft on the ground or in the air.
OTHR	**Other:** Any occurrence not covered under another category.
RAMP	**Ground handling:** Occurrences during (or as a result of) ground handling operations.
RE	**Runway excursion:** A veer off or overrun off the runway surface.

Code	Description
RI	**Runway incursion:** 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 takeoff of aircraft.
SEC	**Security related:** Criminal/Security acts which result in accidents or incidents (per Annex 13 to the Convention on International Civil Aviation).
SCF-NP	**System/component failure (non-powerplant):** Failure or malfunction of an aircraft system or component other than the powerplant.
SCF-PP	**System/component failure (powerplant):** Failure or malfunction of an aircraft system or component related to the powerplant.
TURB	**Turbulence encounter:** In-flight turbulence encounter.
UIMC	**Unintended flight in IMC:** Unintended flight in Instrument Meteorological Conditions (IMC).
UNK	**Unknown or undetermined:** Insufficient information exists to categorize the occurrence.
USOS	**Undershoot/overshoot:** A touchdown off the runway/helipad/helideck surface.
WILD	**Wildlife:** Collision with, risk of collision, or evasive action taken by an aircraft to avoid wildlife on the movement area of an aerodrome or on a helipad/helideck in use.
WSTRW	**Wind shear or thunderstorm:** Flight into wind shear or thunderstorm.

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