

ICAO Bird/wildlife Strike Information System (IBIS) Manual

and the Challenges to International Strike Data Sharing

U.S. Aviation Wildlife Management Conference

**Birds, Planes and Safety Gains: Connecting
Science, Policy and Practice**

Cleveland, OH

August 4-6 2026

John R Weller

FAA National Wildlife Biologist



**Federal Aviation
Administration**

Strike Reporting Effects Worldwide

small actions can cause big changes later

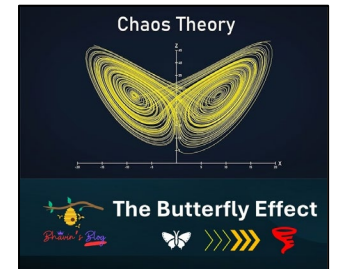
Domino - predictable series of events, can be planned for



Snowball - escalating series of events, often out of control



Butterfly - series of events that result in unintended consequences



Proposed Initiatives to ICAO – 2020

Following Updates in 2020

- ICAO Airport Services Manual Part 3 Doc 9137 (5th edition, 2020)
- ICAO Procedures for Air Navigation Services – Aerodromes Doc 9981 (3rd edition, 2020)

- 1) *Update the ICAO Birdstrike Information System (IBIS) Manual Doc 9332 (3rd edition published 1989)***
- 2) Permit International Data Access and Data Sharing for Wildlife Strikes**

ICAO ADOP.015.04 Job Card formalized 2 February 2021

MANUAL ON THE
ICAO BIRD STRIKE INFORMATION
SYSTEM (IBIS)

THIRD EDITION — 1989



Approved by the Secretary General and published under his authority

INTERNATIONAL CIVIL AVIATION ORGANIZATION

ANNEX 14 – Aerodromes
9.4 Wildlife strike hazard reduction

**9.4.2. Wildlife strike reports shall be collected
and forwarded to ICAO for inclusion in the
IBIS database.**

*Note. The IBIS is designed to collect and disseminate
information on wildlife strikes to aircraft. Information
on the system is included in the Manual on the IBIS
(Doc 9332).*

Strike submission formats

Excel, ECCAIRS, Word, PDF's, Images

Update the IBIS Manual – Why?

- ✓ Data Analytics Software outdated.
- ✓ Doc 9137 (2020) defined wildlife / aircraft strike but provided no definition of WHAT should be reported as a strike.
- ✓ No guidance re: strike data collection or documentation procedures.
- ✓ No guidance on strike data validation (QC/QA).
- ✓ No guidance on basic data analyses.
- ✓ No guidance for standard key word use.



ICAO BIRD / WILDLIFE STRIKE REPORTING SYSTEM

(IBIS – Doc 9332) Submitted December 2023

1989 3rd Edition IBIS

CHAPTER 1 – Reporting

CHAPTER 2 – Analyses of Bird Strike Reports

CHAPTER 3 – Computer Storage of Bird Strike Reports

* Almost 50 pages of Coding Instructions (72 pages total)

2024 4th Edition IBIS

CHAPTER 1 – Background

CHAPTER 2 - State Wildlife Strike Report Collection

CHAPTER 3 - Management of Strike Data

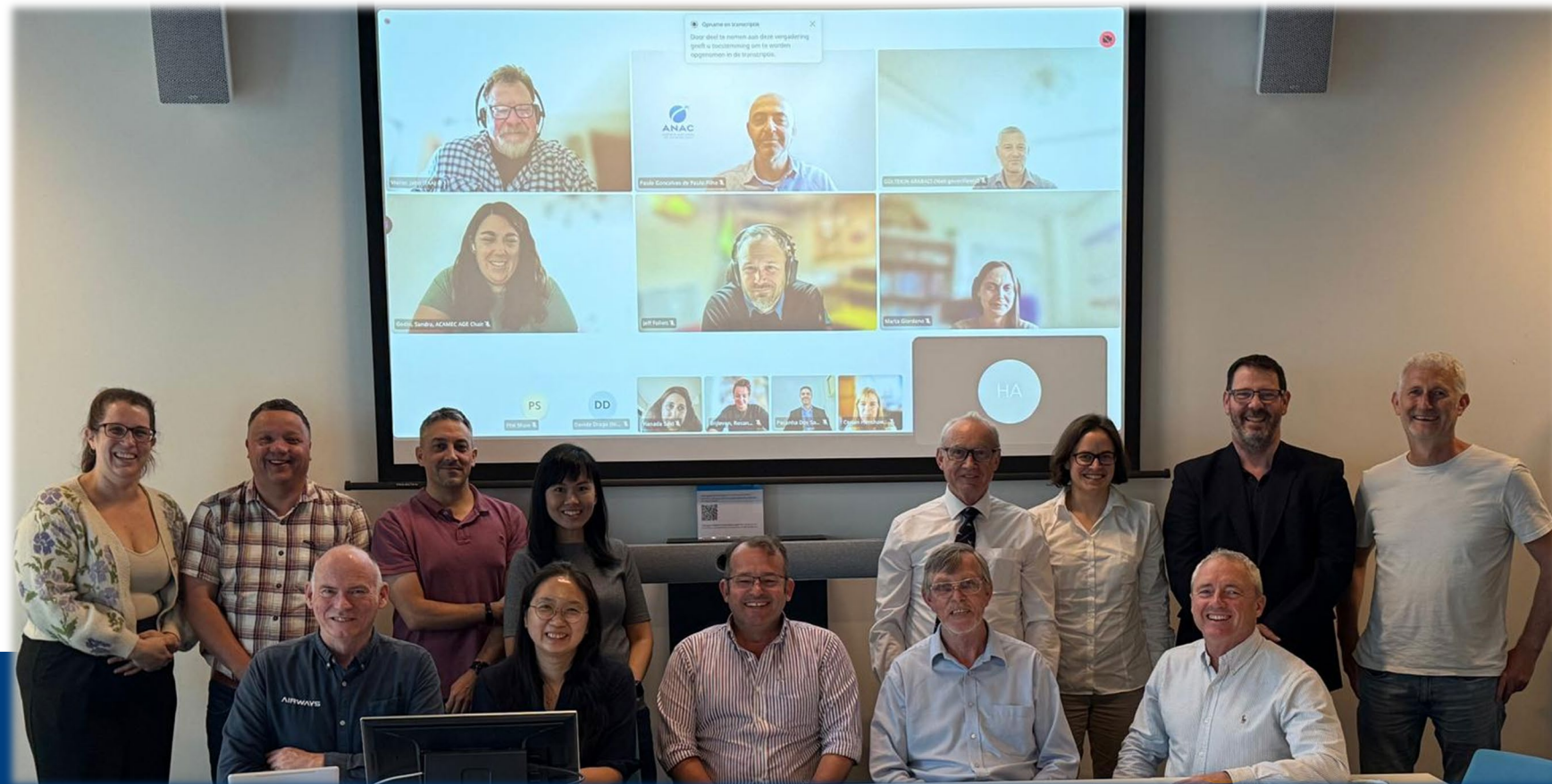
CHAPTER 4 - Reporting to ICAO (Excel, ECCAIRS, pdf)

CHAPTER 5 - Analyzing the Data

IBIS Manual (Doc 9332) Proposed New Appendices

- ▶ ~~Appendix 1 - The Strike Form~~
- ▶ ~~Appendix 2 - The Strike Form Data Structure (Glossary of the Data & Fields)~~
- ▶ Appendix 3 - Remains Collection / Identification Procedures
- ▶ Appendix 4 - Data Analyses Visuals

**Note. ADOP.015.03-
ICAO-IBIS Manual (Doc
9332) will be published
in 2026**



Proposed IBIS Manual Doc 9332 (4th ed. 2023) Strike Report Form

*** Designed to
aid States**

Name _____ Organisation _____ Contact Details _____ Date day _____ month _____ year _____ local time _____ hr _____ min Report Type ☐ Strike ☐ Near Collision Remains Found ☐ Carcass ☐ Feathers ☐ Tissue/blood ☐ Submitted for analysis ☐ None Type of wildlife ☐ Bird ☐ Bat ☐ Terrestrial animal ☐ Other ☐ Unknown Species (common name) _____ Size Reference (if species unknown) _____ ☐ Small ☐ Medium ☐ Large  See reverse for more examples Number struck _____ Number seen _____ Aircraft Registration _____ Flight Number (if applicable) _____ Operator _____ Make and Model _____ Pilot Warned of wildlife ☐ ANSP ☐ Aerodrome Staff ☐ PIREP ☐ ATIS ☐ NOTAM ☐ Not warned ☐ Unknown What were the effects on flight (select all that apply) ☐ None ☐ Aborted take-off ☐ Missed approach / go-around ☐ Evasive action ☐ Precautionary / forced landing ☐ Engine(s) shutdown / thrust loss / flameout / fire ☐ Unknown ☐ Other (specify) _____ Remarks: distinctive colouration of bird, attach photos of damage, carcass, remains, etc	Aerodrome _____ Runway (or taxiway) used _____ Location if En Route _____ Height AGL (ft) _____ Speed IAS (kts) _____ Phase of Flight ☐ Standing (STD) ☐ En Route (ENR) ☐ Taxi (TXI) ☐ Manoeuvring (MNV) ☐ Takeoff (TOF) ☐ Approach (APR) ☐ Initial Climb (ICL) ☐ Landing (LDG) ☐ Unknown (UKN) Parts of Aircraft ☐ Aircraft destroyed <table border="1"><thead><tr><th></th><th>Struck</th><th>Damage</th><th>Repair</th><th>Replace</th></tr></thead><tbody><tr><td>Radome</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Windshield</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Nose</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Engine no. 1</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>2</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>3</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>4</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Propeller / rotor</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Wing</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Fuselage</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Landing Gear</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Tail</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Lights</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Sensor</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Other</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>specify _____</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Unknown</td><td>☐</td><td>☐</td><td>☐</td><td>☐</td></tr><tr><td>Cloud Cover ☐ None ☐ Some Cloud ☐ Overcast ☐ Smoke</td><td></td><td></td><td></td><td></td></tr><tr><td>Precipitation ☐ Fog ☐ Rain ☐ Snow ☐ None</td><td></td><td></td><td></td><td></td></tr><tr><td>Wind Direction (degrees) _____ Wind Speed (knots) _____</td><td></td><td></td><td></td><td></td></tr><tr><td>Operational Impacts ☐ Delay Hrs _____ ☐ Time aircraft on ground (AOG) Hrs _____ ☐ Other costs _____</td><td></td><td></td><td></td><td></td></tr></tbody></table>		Struck	Damage	Repair	Replace	Radome	☐	☐	☐	☐	Windshield	☐	☐	☐	☐	Nose	☐	☐	☐	☐	Engine no. 1	☐	☐	☐	☐	2	☐	☐	☐	☐	3	☐	☐	☐	☐	4	☐	☐	☐	☐	Propeller / rotor	☐	☐	☐	☐	Wing	☐	☐	☐	☐	Fuselage	☐	☐	☐	☐	Landing Gear	☐	☐	☐	☐	Tail	☐	☐	☐	☐	Lights	☐	☐	☐	☐	Sensor	☐	☐	☐	☐	Other	☐	☐	☐	☐	specify _____	☐	☐	☐	☐	Unknown	☐	☐	☐	☐	Cloud Cover ☐ None ☐ Some Cloud ☐ Overcast ☐ Smoke					Precipitation ☐ Fog ☐ Rain ☐ Snow ☐ None					Wind Direction (degrees) _____ Wind Speed (knots) _____					Operational Impacts ☐ Delay Hrs _____ ☐ Time aircraft on ground (AOG) Hrs _____ ☐ Other costs _____					Name: First and Last name of the reporting person¹. Position/Organisation: Job title and organisation name¹. Contact Details: Email address and/or phone number¹. Date: Date of the incident. Specify if the date refers to another date, such as when remains were found or when species identification information was submitted. Report Type: Strike: A collision with wildlife took place. Near collision: A collision with wildlife was avoided. This could be done by evasive manoeuvre by the aircraft, the animal or both, or when an avoidance action would have been appropriate. Also known as near miss. Remains Found: Carcass: Body of animal was found. Tissue/Blood: Body parts or blood smear was found. Feathers: Feathers were found. None: No remains were found, narrative only (e.g., pilot or ANSP report). Submitted for Analysis: Were the animal remains sent to a laboratory for identification of species? Type of Wildlife Terrestrial animal: Land dwelling mammals, reptiles, amphibians. Other: Animals which do not fit in one of the above categories (e.g., locust swarm, whales). Unknown: In case that it is not clear which kind of animals were involved. Species (common name):² Be as specific as possible. For example, using mallard instead of duck, or duck instead of waterfowl. Size Reference: Small: Examples include sparrows, starlings, and swallows. Medium: Examples include gulls, ducks, and kestrels. Large: Examples include stocks, vultures, geese, and pelicans. Number Struck: Provide the closest possible estimate of the number of wildlife that collided with the aircraft. Number Seen: Provide the closest possible estimate of the number of wildlife involved/present in the conflict. Make and model: Use descriptive name or ICAO type designator (e.g., de Havilland Canada Twin Otter or DHC6) Pilot Warned of Wildlife: Did the aircrew receive any type of warning prior to the occurrence? ANSP: Real-time radio communication by air traffic control or flight information service. Aerodrome Staff: Real-time radio communication by aerodrome staff. PIREP: Pilot report via radio. ATIS: Aerodrome Terminal Information System broadcast. NOTAM: Notice to Air Missions publications. Not warned: No warning was received. Unknown: Not aware of any warnings about wildlife. What were the effects on flight: Unknown: Could not be identified (e.g., when a strike was identified after a flight took place). Other: Please specify (e.g., in some circumstances heavier than normal or full braking may be required, or runway excursion). ¹ Personal information will solely be used to contact the reporting person in case additional information is required. ² Use the IOC World Bird List for a current list of bird species https://www.worldbirdnames.org/new/ioc-lists/master-list-2/	Aerodrome: Specify the location (common name, ICAO code, or IATA code). Runway (or taxiway) used: The name of the runway/taxiway where the incident occurred. Location if En Route: Distance from nearby aerodrome or exact coordinates. Phase of Flight Standing: Prior to pushback or taxi, or after arrival, at the gate, ramp, or parking area, while the aircraft is stationary. Taxi: Movement of an aircraft on the surface of an aerodrome under its own power occurs, excluding takeoff and landing. Takeoff: From the application of take-off power until reaching the first prescribed power reduction, or until reaching the VFR pattern or 1000 feet above runway end elevation, whichever comes first or the termination (abort) of the takeoff. Initial Climb: IFR: From completion of take-off to arrival at initial assigned cruise altitude. VFR: From completion of take-off to initial cruise altitude. En Route: [IFR] From completion of Initial Climb through cruise altitude and completion of controlled descent to the Initial Approach Fix; or [VFR] From completion of Initial Climb through cruise and controlled descent to the VFR pattern altitude or 1000 feet above runway elevation, whichever comes first. Manoeuvring: A planned low-level flight, or attitude, or planned abnormal attitude, or abnormal acceleration occurs. Low altitude/aerobatic flight operations. Approach: [IFR] From the outer marker to the to the point of transition from nose-low to nose-high attitude immediately prior to the flare above the runway; or [VFR] from 1000 feet above the runway end elevation or from the point of VFR pattern entry to the flare above the runway. Landing: From the point of transition from nose-low to nose-up attitude, immediately before landing (flare), through touchdown and until aircraft exits landing runway, comes to a stop or when power is applied for takeoff in the case of a touch-and-go landing, whichever occurs first. Parts of Aircraft Sensor: Specify which sensor(s) was/were struck; e.g., pilot tube, GPS antenna, etc. Other, specify: In case that the part hit is not listed above, please specify. Unknown: In case that it is unknown which part was hit and whether there was any damage/need for repair or replacement Operational Impacts Delay Hrs: How long was the flight delayed? Time aircraft on ground (AOG) hrs: How long was the aircraft out of service? Other Costs: Include any other costs including cost of replacement parts of repair. Remarks: Include a full narrative. Add as much detail and additional information regarding the occurrence and how it happened. Photos: All photos should be taken in focus and as soon as possible after the occurrence to air species identification. Damage, area of strike: Take multiple photos of all struck areas on the aircraft and engines, to include fan blades and other visible engine components. Remains, carcass: Take photos on a contrasting background, include multiple photos from different angles, add a scaling object for perspective, ideally a ruler. Include photos of the wing outstretched, the head, the feet, etc.
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BIRD STRIKE ASSOCIATION OF CANADA
ASSOCIATION CANADIENNE SUR LE PÉRIL AVIAIRE



ICAO • OACI • ИКАО



Ethiopian Civil Aviation Authority



Australian Government
Civil Aviation Safety Authority



Transport Canada
Transports Canada



Federal Aviation Administration

**2ND ICAO
Initiative:
Q1 2021 - Q4 2024**

***International
Strike Data
Access***

CHALLENGES: RE: STRIKE DATA FROM ICAO MEMBER STATES

- IBIS raw data inaccessible
- Strike data at State level incomplete / inaccurate
- Must use ECCAIR system to access member State's data if they used ECCAIRs

CONSEQUENCES: OF INCOMPLETE STRIKE DATA WITHIN MEMBER STATES

- Negative Impacts to Risk Management
- Negative Impacts re: Safety and Economic losses
- Negative Impacts to Financial & Resource Management and Program Evaluations
- Compliance issues?



IBIS DATA ACCESS MIGHT INCLUDE:

- Raw, unfiltered data from each member State
- Combined data from all member States filtered into a single annual / comprehensive spreadsheet (like U.S.)

UNSUCCESSFUL RESULTS MAY INCLUDE:

- IBIS data continues to provide **LITTLE TO NO BENEFIT** to member States; remains inaccessible and unusable
- Regulators, Researchers, Universities, etc. continue to request strike data from individual States

IBIS DELIVERABLES

Periodic Electronic Bulletins (EB) 2001 - 2024

EB 2009/37

Reports for the years 2001 to 2007



International Civil Aviation Organization

ELECTRONIC BULLETIN

For information only

EB 2009/37

11 December 2009

2001-2007 BIRD STRIKE ANALYSES (IBIS)

The analyses of bird strike reports for the years 2001 to 2007 are based on 42 508 reports, received from fifty-one States on strikes occurring in 145 States and territories as shown at Attachment A. A summary of bird strikes reported to the ICAO Bird Strike Information System (IBIS) for the years 2001 to 2007 is included at Attachment B, a chart of Significant Bird Strikes at Attachment C, IBIS World Bird Strike Statistics at Attachment D and a list of bird types at Attachment E.

Amendment 10 to Annex 14 — *Aerodromes*, Volume 1 — *Aerodrome Design and Operations*, which was adopted by the Council on 4 March 2009, became applicable on 19 November 2009. This amendment introduces new provisions, including replacing “bird strike” with “wildlife strike” to cover both strikes by birds and other animals, ongoing evaluation of the wildlife hazard on or in the vicinity of aerodromes by competent personnel, and a Recommendation on the responsibility of States to give consideration to aviation safety concerns related to land developments in the vicinity of an aerodrome that may attract wildlife.

The IBIS programme is an important element in accident prevention and is highly supported by airlines and experts working to reduce the threat of bird strikes to aircraft. It has contributed significantly to the development of international Standards and Recommended Practices (SRPs) on bird strike hazard reduction. It should be noted that with the applicability of Amendment 10 to Annex 14, Volume 1, information on strikes by animals other than birds shall also be included in IBIS. Future analyses will cover both strikes by birds and other animals provided that sufficient information is available.

Enclosures:

A — List of States and Territories for the years 2001-2007
B — Summary of Bird Strikes reported to ICAO Bird Strike Information System (IBIS) for the years 2001-2007
C — Chart of Significant Bird Strikes for the years 2001-2007
D — IBIS World Bird Strike Statistics 2001-2007
E — List of bird types for the years 2001-2007

Issued under the authority of the Secretary General

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EB 2017/25

Reports for the years 2008 to 2015



International Civil Aviation Organization

ELECTRONIC BULLETIN

For information only

EB 2017/25

12 May 2017

2008-2015 WILDLIFE STRIKE ANALYSES (IBIS)

The analyses of wildlife strike reports for the years 2008 to 2015 are based on 97 751 reports, received from ninety-one States on strikes occurring in 105 States and territories as shown at Attachment A. A summary of wildlife strikes reported to the ICAO Bird Strike Information System (IBIS) for the years 2008 to 2015 is included at Attachment B, IBIS World Wildlife Strike Statistics at Attachment C and a list of wildlife types at Attachment D. The above attachments (available in English only) can be found at www.icao.int/IBIS.

The analyses of wildlife strike data and observing and monitoring of wildlife activities can reveal trends that will assist airport authorities in identifying areas of concern, which should be addressed through a well-managed wildlife control programme. Wildlife strike statistics can also be analysed to determine those times of year or day when wildlife control is needed the most.

In order to better facilitate occurrence reporting and data analysis, ICAO now has replaced the old IBIS computer application with a new reporting system based on the European Co-ordination Centre for Accident and Incident Reporting Systems (ECCAIRS) platform. A User Manual and Software Installation Manual can be downloaded at www.icao.int/IBIS. States are encouraged to submit wildlife strike reports either via ECCAIRS e5e4f files, or via an ECCAIRS Excel-based form that can also be downloaded at www.icao.int/IBIS.

Enclosures:

A — List of States and Territories for the years 2008-2015
B — Summary of Wildlife Strikes reported to ICAO Bird Strike Information System (IBIS) for the years 2008-2015
C — IBIS World Wildlife Strike Statistics 2008-2015
D — List of wildlife types for the years 2008-2015

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EB 2023/30

Reports for the years 2016 to 2021



International Civil Aviation Organization

ELECTRONIC BULLETIN

For information only

EB 2023/30

27 June 2023

2016-2021 WILDLIFE STRIKE ANALYSES (IBIS)

The analyses of wildlife strike reports for the years 2016 to 2021 are based on 273,343 reports, received from 136 States on strikes occurring in 194 States and territories, as shown in Attachment A. A summary of wildlife strikes reported to the International Civil Aviation Organization (ICAO) Bird Strike Information System (IBIS) for the years 2016 to 2021 is included in Attachment B, the IBIS World Wildlife Strike Statistics in Attachment C, and a list of wildlife species in Attachment D. The above attachments (available in English only) can be found at www.icao.int/IBIS.

The analyses of wildlife strike data and observing and monitoring of wildlife activities can reveal trends that will assist aerodrome operators in identifying areas of concern, which should be addressed through a well-managed wildlife control programme. Wildlife strike statistics can also be analysed to determine during which times of year or day wildlife control is most needed.

In order to better facilitate occurrence reporting and data analysis, ICAO has replaced the previous IBIS computer application with a reporting system based on the European Co-ordination Centre for Accident and Incident Reporting Systems (ECCAIRS) platform. A User Manual and Software Installation Manual can be downloaded at www.icao.int/IBIS. States are encouraged to submit wildlife strike reports either via ECCAIRS “e5e4f” files, or via an ECCAIRS Excel-based form that can also be downloaded at www.icao.int/IBIS.

Enclosures:

A — List of States and Territories for the years 2016-2021
B — Summary of Wildlife Strikes reported to ICAO Bird Strike Information System (IBIS) for the years 2016-2021
C — IBIS World Wildlife Strike Statistics 2016-2021
D — List of wildlife species for the years 2016-2021

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EB 2026/8

Reports for the years 2022 to 2024



International Civil Aviation Organization

ELECTRONIC BULLETIN

For information only

EB 2026/8

20 March 2026

2022-2024 WILDLIFE STRIKE ANALYSES (IBIS)

The analyses of wildlife strike reports for the years 2022 to 2024 are based on 214,734 reports, received from 156 States on strikes occurring in 214 States and territories as shown in Attachment A. A summary of wildlife strikes reported to the International Civil Aviation Organization (ICAO) Bird Strike Information System (IBIS) for the years 2022 to 2024 is included in Attachment B. The IBIS World Wildlife Strike Statistics in Attachment C, a list of wildlife species in Attachment D, and a summary of wildlife strikes by ICAO Region in Attachment E, are all for the years 2016 to 2024. The above attachments (available in English only) can also be found at <https://www.icao.int/welcome-wildlife-hazard-management-website>.

It is important to highlight that during the data collection period covering the years 2022 to 2024, ICAO also received an additional 40,579 wildlife strike reports related to the years 2016 to 2021. As a result, the charts and statistics presented in this Electronic Bulletin for the years 2016 to 2021 have been updated and may differ slightly from those published in EB 2023/30 dated 27 June 2023.

The analyses of wildlife strike data as well as the observing and monitoring of wildlife activities can reveal trends that will assist aerodrome operators in identifying areas of concern, which should be addressed through a well-managed wildlife control programme. Wildlife strike statistics can also be used to determine which times of year or day wildlife control is most needed.

In order to better facilitate occurrence reporting and data analysis, ICAO is considering the development of a dedicated IBIS reporting system based on the new European Co-ordination Centre for Accident and Incident Reporting Systems (ECCAIRS2). In the meantime, States can continue to submit wildlife strike reports via the IBIS template form that can also be downloaded at <https://www.icao.int/welcome-wildlife-hazard-management-website>.

Enclosures (English only):

A — List of States and Territories for the years 2022-2024
B — Summary of Wildlife Strikes reported to the ICAO Bird Strike Information System (IBIS) for the years 2022-2024
C — IBIS World Wildlife Strike Statistics 2016-2024
D — List of wildlife species for the years 2016-2024
E — Summary of Wildlife Strikes by ICAO Region for the years 2016-2024

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20/3/2026



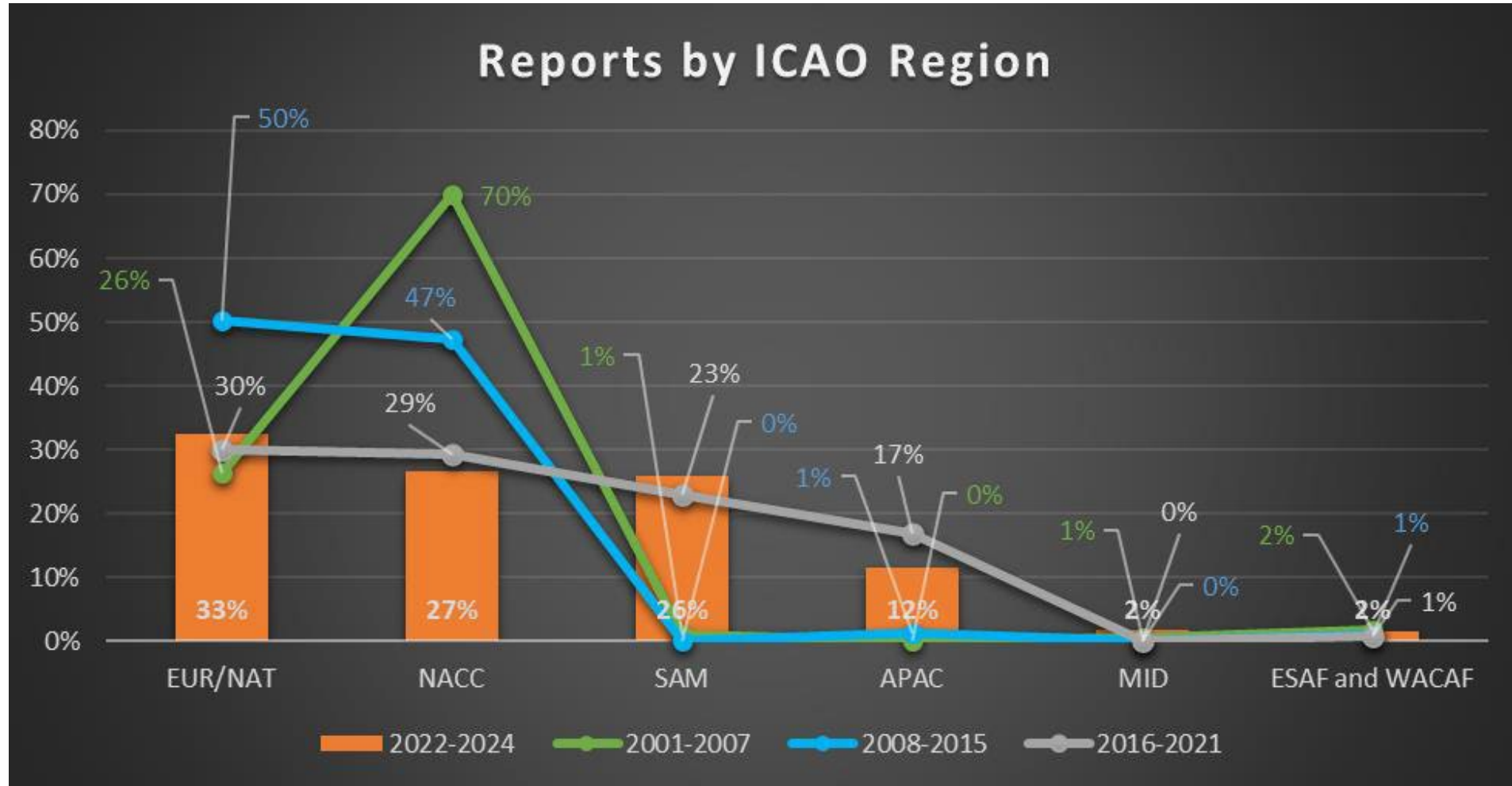
ICAO

12

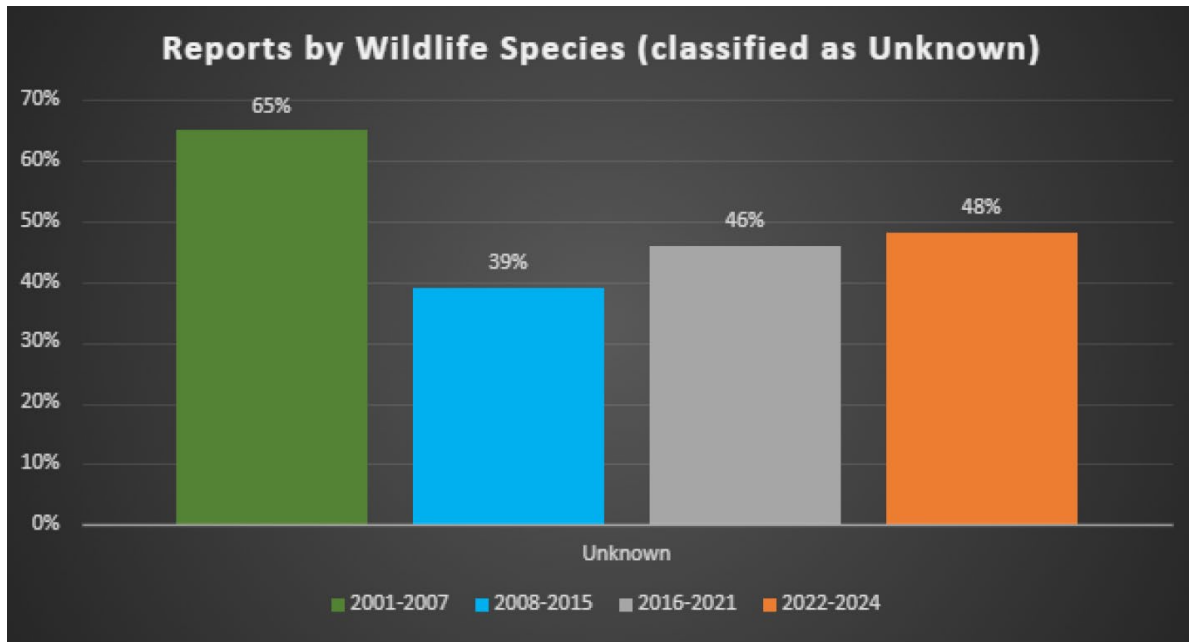


Federal Aviation
Administration

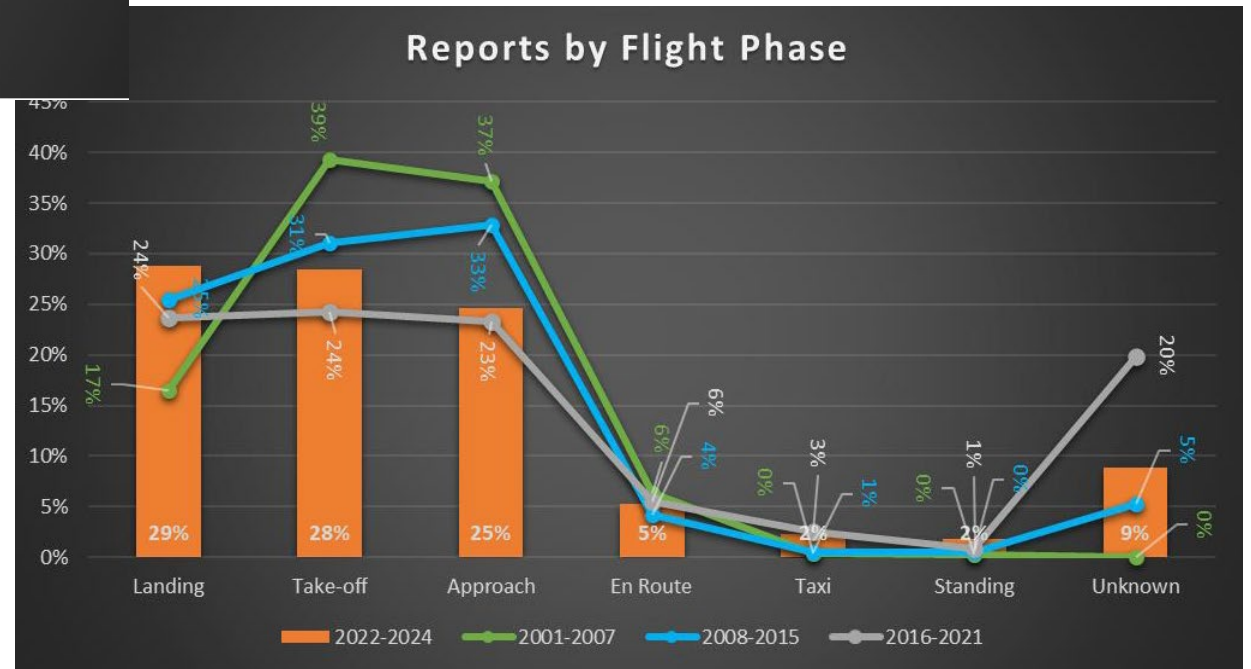
ICAO: REPORTING WILDLIFE STRIKES INTO IBIS 2001 to 2024



UNKNOWN IBIS WILDLIFE STRIKES 2001-2024



Reports By Flight Phase



IBIS DATA ANALYSIS FOR THE YEARS 2001-2024

DATA	2001-2007 (7 years)	2008-2015 (8 years)	2016-2021 (6 years)	2022-2024 (3 years)
Strikes Reported	42,508	97,751	273,362	214,734
Countries Reporting Strikes	51	91	136	160
Countries Where Strikes Occurred	145	105	194	218
Countries that lost strike data	94	14	58	58



Strike Data between the US and the UK (2010-2019)



- **70% of UK Air Carrier strikes within the US were missing from US National Wildlife Strike Database (NWSD)**
- **50% of UK Air Carrier strikes in the US NWSD were missing from their own UK database.**
- **20% of the US Air Carrier strikes in the UK were missing from UK DB.**

US Air Carrier Strikes in Foreign Countries



- The US NWSD contains 340,000+ individual strike incidents (1990 – 2025)
- 5,674 strikes reported for US-registered aircraft in 351 foreign airports in 113 countries (1990-2025).
- 342 strikes in 114 airports in 62 countries (2025)

***How much data is “lost” each year?**

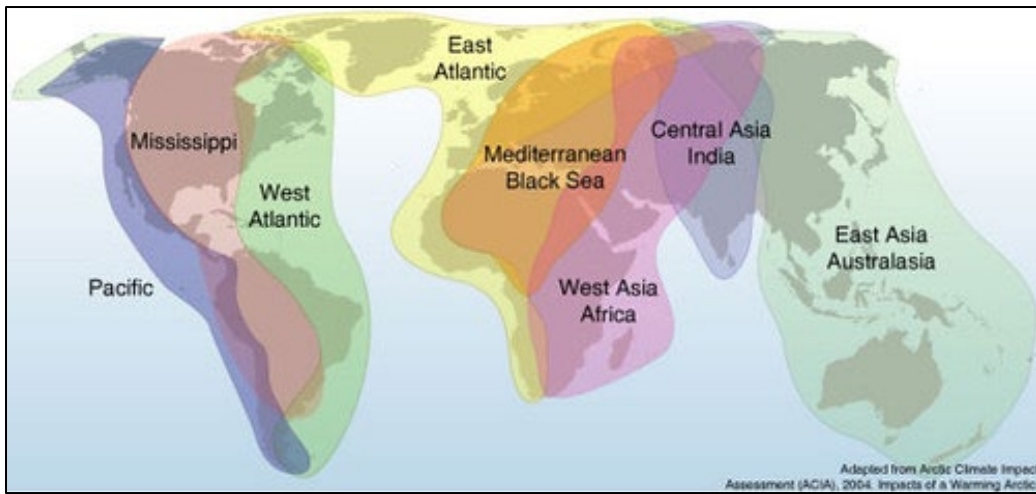
NWSD Missing Data

“LOST”

STRIKE

DATA

- AIRPORTS – always improving
- AIRLINES - improving
- PILOTS - improving
- ATO – improving
- ICAO and International Airports / Air Carriers - nope



Strike Data Sharing VS Avian Migration Conservation

- Cooperative strike data sharing **SHOULD EQUATE** to international migratory bird collaborative efforts.
- Birds move across international boundaries. They are at risk and they can represent a risk to aircraft.
- 187 ICAO member States and Territories are currently involved in one or more of the 49 international **MIGRATORY BIRD TREATIES** and collaborative agreements to protect migratory birds.

IF WE CAN SHARE CONSERVATION DATA THEN WE CAN SHARE SAFETY / CONSERVATION DATA



**Federal Aviation
Administration**



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