

We are
Airports

Flight Plan for Updating the IBIS Manual

The World's Repository for Wildlife Strikes

**ICAO/AAWHG WHM Webinar and
3rd Meeting of the Asia/Pacific Wildlife Hazard Management
Working Group (AP-WHM WG/3)
Video Teleconference, 18 to 21 May 2021**

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FAA
Office of Airports

ICAO Wildlife / Aircraft Guidance

2016



International Standards
and Recommended Practices

Annex 14 to the Convention on International Civil Aviation

Aerodromes

Volume I
Aerodrome Design and Operations
Seventh Edition, July 2016



This edition supersedes, on 10 November 2016, all previous editions of Annex 14, Volume I.
For information regarding the applicability of the Standards and Recommended Practices, see Chapter 1, 1.2 and the Foreword.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

2020



Doc 9981

PROCEDURES FOR AIR NAVIGATION SERVICES
Aerodromes
Third Edition, 2020



This edition supersedes, on 5 November 2020, all previous editions of Doc 9981.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

2020



Doc 9137

Airport Services Manual

Part 3 — Wildlife Hazard Management
Fifth Edition, 2020



Approved by and published under the authority of the Secretary General

INTERNATIONAL CIVIL AVIATION ORGANIZATION



ICAO IBIS Manual - 1989

Doc 9332-AN/909

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

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Proposed Initiatives to ICAO

- 1) Update the ICAO Birdstrike Information System (IBIS) Manual
- 2) Permit International Data Access and Data Sharing

Enhance global aviation safety by improving international reporting of wildlife/aircraft strike incidents as well as international data access and data sharing.

ICAO Job Card ADOP.015.03

(Endorsed 10 February 2021)

- ICAO Birdstrike Information System (IBIS) Manual Doc 9332 (3rd edition) last published in 1989
- Strike reporting throughout ICAO's member states is sporadic, unreliable and lacks standardized protocols to ensure comparable (or usable) quality.
- Challenges with strike data include:
 1. collection
 2. quality control / quality assurance
 3. analysis, evaluation and summation

1989 – changes since then...






-  Stigma of reporting strikes greatly reduced
-  CAA's effectively use mandates and outreach to improve quality / quantity of data
-  Field data more easily collected / analyzed with handheld electronic systems
-  Detection / monitoring systems (avian radar, FOD radar, electro-optical) improve data collection on strikes and near miss events
-  Feather ID institutions (Smithsonian) now provide incomparable assistance towards identifying species involved in strikes.



Photo: Thomas Yin – BWI CAGO strike

Update the IBIS Manual – Why?



No standardized strike reporting protocol



No minimum standards for strike report forms



New software systems available for recording / submitting strike data to ICAO



ECCAIRS (aka: the European Coordination Centre for Accident and Incident Reporting system) is being updated



Manual should complement current regulatory guidance; provide current codes as well as relevant and improved data management techniques

Wildlife strike definition from Airport Services Manual #3 (Doc 9137) acceptable to IBIS WHMEG. Did not define WHAT should be reported as a wildlife strike (must differentiate between wildlife strike and a wildlife incident)

Doc 9137

1.3.2 A strike is a collision between wildlife and an aircraft; a “near miss” is the potential of a wildlife strike.

1.3.3 To manage wildlife hazards, one must first assess the level of risk for each species present. Recording wildlife presence (at a species level) on, and in the vicinity of, the aerodrome, wildlife strikes and near misses is therefore necessary.

Doc 9137 - Wildlife Strike vs Wildlife Incident

1.3.4 The following events should be recorded and used for assessing and mitigating the risk of wildlife hazards:

- a) any reported collision between wildlife and an aircraft for which evidence in the form of a carcass, feathers, any other remains, or damage to the aircraft is found;
- b) any reported collision between wildlife and an aircraft for which no physical evidence is found, but an indication of a collision exists (e.g. visual observation of the collision or acoustic perception of the impact);
- c) any wildlife found dead on an aerodrome without any other obvious cause of death; and
- d) incidents or observations where the presence of wildlife on or in the vicinity of the aerodrome could have an effect on a flight (e.g. missed approach, aborted take-off, etc.).**

ICAO Job Card ADOP.015.03

(Endorsed 10 February 2021)

THE GOAL IS TO:

Update each section of the IBIS manual to provide USABLE, EFFECTIVE GUIDANCE that will allow Civil Aviation Authorities, Aerodromes, Biologists, Pilots, Airlines and Engine and Airframe Manufacturers to:

1. Better understand & mitigate hazardous wildlife / risk
2. Reduce financial losses
3. Improve safety.

EXPECTATIONS OF STRIKE DATA

REGULATOR NEEDS ENOUGH QUALITY / QUANTITY DATA TO:

- determine high risk species
- track national trends
- provide scientific foundation for regulatory guidance



AIRPORTS NEED ENOUGH QUALITY / QUANTITY DATA TO:

- identify & mitigate hazardous species, strike dynamics and attractants and evaluate effectiveness of wildlife management program



INDUSTRY NEEDS ENOUGH QUALITY / QUANTITY DATA TO:

- evaluate effectiveness of aircraft components

INACCURATE / INCOMPLETE STRIKE DATA

INEFFECTIVE RISK MANAGEMENT

- Target wrong species
- Inadequate or incorrect habitat attractant management

FINANCIAL INEFFICIENCY / MISAPPROPRIATION

- Resources incorrect / inadequate
- Funding used / prioritized elsewhere
- Personnel misused / undervalued

PROGRAM EVALUATION IMPACTED

- Evaluation requires data quality / quantity
- Inadequate evaluation equals guesswork and increased risk

OUT OF COMPLIANCE

- Aerodrome fails to meet minimum requirements / maintain compliance



IBIS Manual – Final Draft Q4 2022

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Flight Plan for IBIS Manual

Chapters will include:

- **Background (Who, What, When, Where, Why, How)**
- **Reporting Systems / Formats (ECCAIRS, Excel, Paper)**
- **Minimum Standard (critical elements) Strike Report Form**
- **Quality Control / Quality Assurance**
- **Descriptive Analyses / Significant Statistics / Usability of Data**
- **Resources for ID Assistance (e.g. Smithsonian)**
- **Codes**



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Annex 14 — Aerodromes

9.4 Wildlife strike hazard reduction

9.4.1 The wildlife strike hazard on, or in the vicinity of, an aerodrome **shall be assessed** through:

a) the establishment of a national procedure for recording and reporting wildlife strikes to aircraft;

Civil Aviation Authorities CANNOT adequately assess their wildlife strike hazards with inadequate data



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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 ICAO Bird Strike Information System (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 ICAO Bird Strike Information System (IBIS) (Doc 9332).

International Data Access and Data Sharing

- **Strike data from the US and other ICAO Member States is already openly available to the public.**
- **Strike data for all Member States is incomplete and/or inaccurate**
 - **INEFFECTIVE RISK MANAGEMENT**
 - **FINANCIALLY WASTEFUL**
 - **PROGRAM EVALUATION NEGATIVELY IMPACTED**
 - **OUT OF COMPLIANCE**

International Data Access and Data Sharing

- INTERNATIONAL STRIKES -



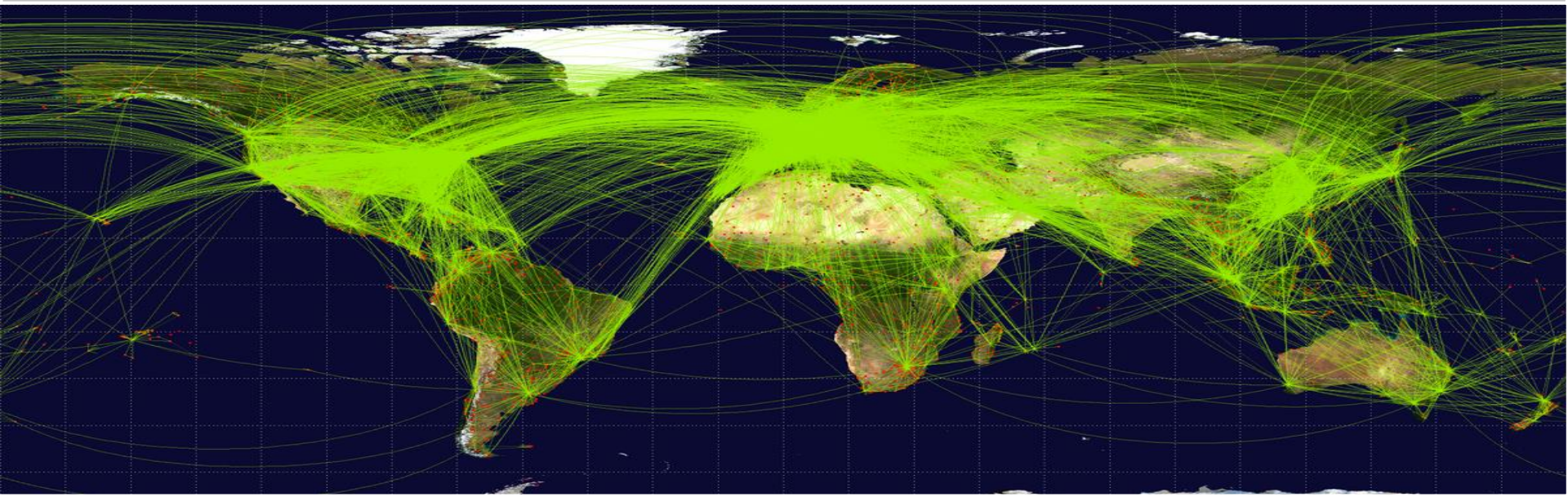
US Data (reliable): 28 years = 4,412 strikes involving US registered civil aircraft were reported at 308 foreign airports in 109 countries (1990 – 2017)



US Data (reliable): 5 years = 865 bird/wildlife strikes with US registered aircraft outside of US airspace (2016 – 2020)

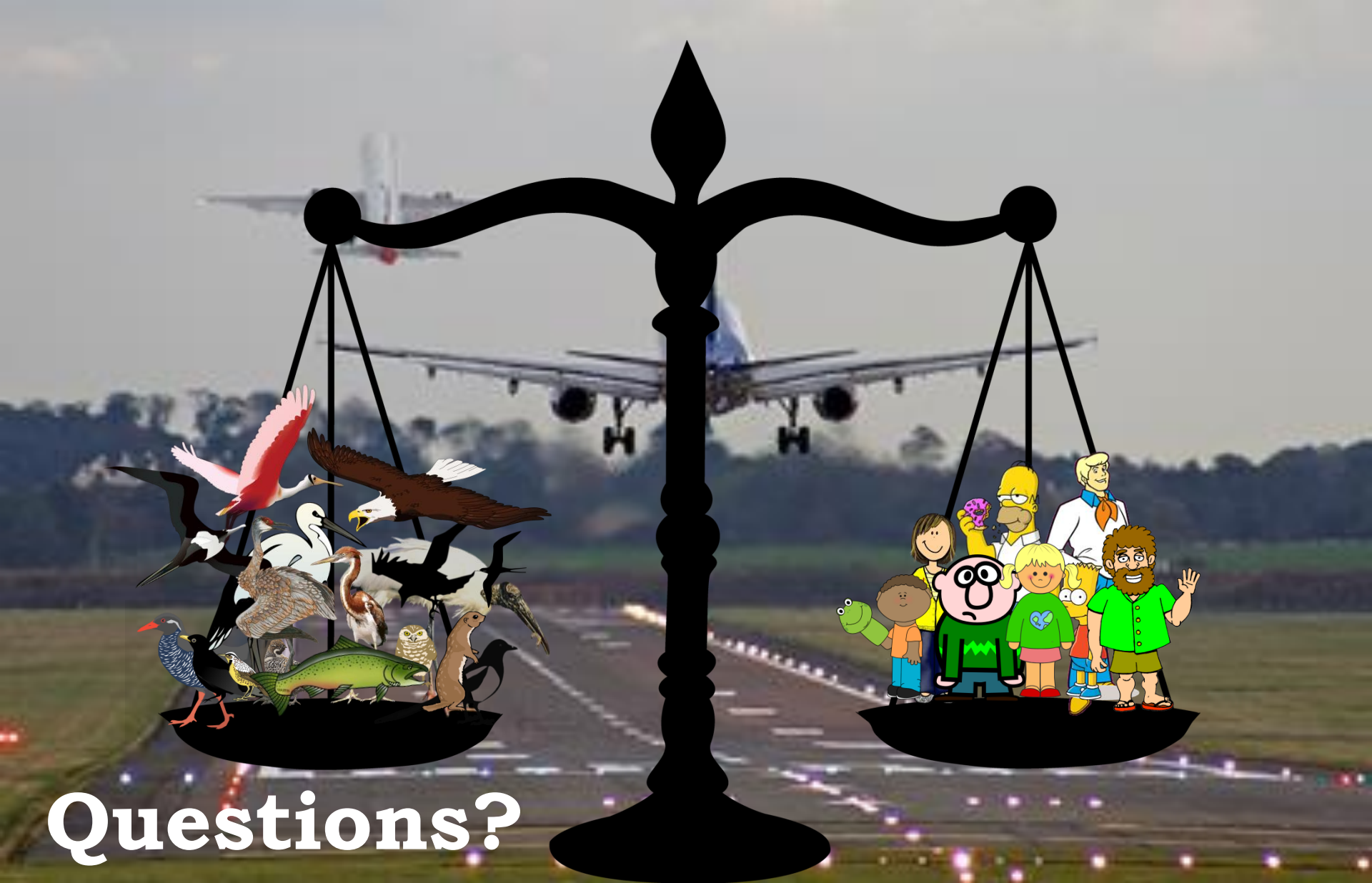


US Data (reliable): 221 strikes with US registered aircraft at 82 foreign airports in 45 countries in 2018



US-UK Air Carriers

- ❑ UK carriers report far more birdstrike events occurring in the US than the FAA's National Wildlife Strike Database suggests >70% missing
- ❑ FAA's NWSD contained very few strike reports by UK carriers in the US – but of those noted, 50% were missing from UKCAA's DB
- ❑ The FAA's NWSD details few US carriers reporting strikes in UK – 20% of those events were missing from UKCAA's DB
- ❑ UK carriers report 'all' strike events in EU reporting regulation – yet reconciliation with US & UK revealed many anomalies & lack of quality



Questions?



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