IBIS Manual for Strike Reporting

(Doc 9332)

WILDLIFE HAZARD MANAGEMENT WORKSHOP

Nairobi KENYA

5-9 February 2024

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FAA Office of Airports

Proposed Initiatives to ICAO - 2020

1) *Update the ICAO Birdstrike Information System (IBIS) Manual Doc 9332 (3rd edition published 1989) Q4 2023*

2) *Permit International Data Access and Data Sharing for Wildlife Strikes Q4 2024*

ADOP.015.03 Job Card formalized 2 February 2021

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

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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1989 – changes since then…

- Stigma of reporting strikes greatly reduced (wildlife strike data recognized as important part of wildlife program evaluation; liability concerns)
- CAA's continuing to improve quality / quantity of data through mandates and outreach
- Field data more easily collected / analyzed with handheld electronic systems
- 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?

- ✓ Data Analytics Software (e.g., ECCAIRS & Microsoft Excel) repeatedly updated since 1989 (Chapter 4 - Reporting to ICAO)

- ✓ Doc 9137 (2020) defined wildlife / aircraft strike but there is no standardized definition of WHAT should be reported as a strike (Chapter 2 Background and Appendix 3 - Remains Collection and Identification)
  - ❖ Evidence? (snarge, carcass, damage)
  - ❖ Birds only? (Mammals, Reptiles)
  - ❖ Confirmed? Unconfirmed?
  - ❖ Only Pilot? Ground Crew? Biologist? ATC?

Update the IBIS Manual – Why?

- ✓ No guidance re: strike data collection or documentation procedures for member States (who, what, when, where, why, how) (Chapters 1, 2, 3, 4, 5)
- ✓ No guidance on strike data validation (QC/QA) (Chapter 3 - Management of Strike Data)
- ✓ No guidance on basic data analyses (why? how? Metrics, KPI's) (Chapter 5 - Analyzing the Data and Appendix 4: Data Analysis Procedures)
- ✓ No guidance for standard key word use:
  ex: strike = bird strike = birdstrike = wildlife strike?
  ex: report vs document?
  ex: snarge vs remains?, etc…
  (Glossary and Chapters 1, 2, 3, 4, 5)

IBIS Manual (Doc 9332) Meetings

DATE	ACTION / GOALS
5/10-11/2021	1st Meeting (virtual)
9/21/2021	2nd Meeting (virtual)
3/29/2022	3rd meeting (virtual)
11/8-10/2022	4th meeting (in-person) USDA HQ Washington, DC, USA (Chapter Teams Assigned - All Chapters ready for edits 2 weeks prior to meeting)
4/18-20/2023	5th meeting (in-person) ICAO HQ, Montreal, Quebec, Canada (All Chapters (1-5) and Appendices - ready for edits March 24, 2023)
9/18-20/2023	6th meeting (in-person) Vancouver, BC, Canada (All Chapters (1-5) and Appendices – ready for edits August 31, 2023)
Q4 2023	ADOP.015.03-ICAO-IBIS Manual (Doc 9332) Completed and Submitted December 2023)

ICAO BIRD / WILDLIFE STRIKE REPORTING SYSTEM (IBIS – Doc 9332) New Chapters

1989 3rd Edition IBIS

CHAPTER 1 – Reporting

CHAPTER 2 – Analyses of Bird Strike Reports

CHAPTER 3 – Computer Storage of Bird Strike Reports

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) - 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

Name _____
Organisation _____
Contact Details _____

Date day_____ month _____ year _____
local time _____ hr _____ min

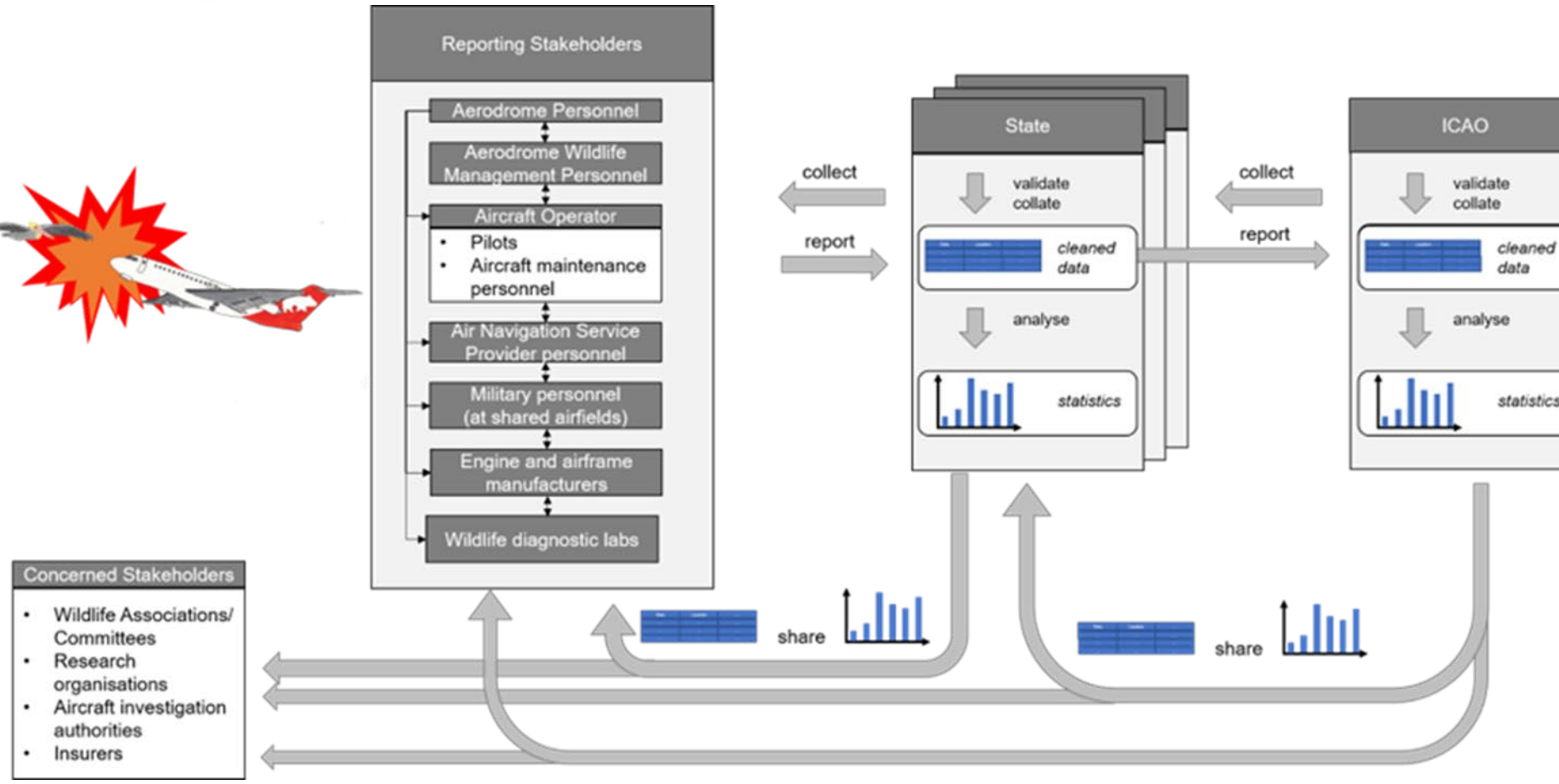
Report Type

ICAO defined a wildlife strike in Doc 9137 as:

"A strike is a collision between wildlife and an aircraft". The term "wildlife," as used in this context, is meant to denote any wild, feral or domestic animal.

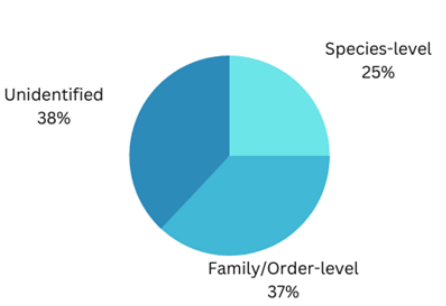
The following events should be reported to the State when:

1) 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;
2) 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);
3) any wildlife found dead on an aerodrome or within flight paths without any other obvious cause of death; or
4) where the presence of wildlife on or in the vicinity of the aerodrome has an effect on a flight (e.g. missed approach, aborted take-off, etc.).

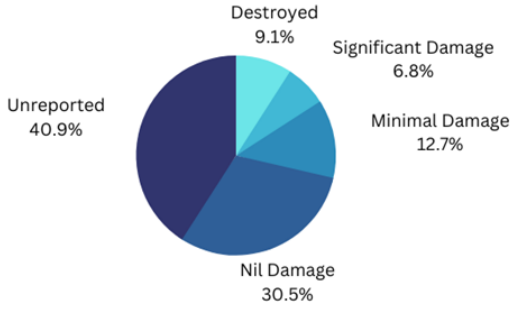


We are Airports

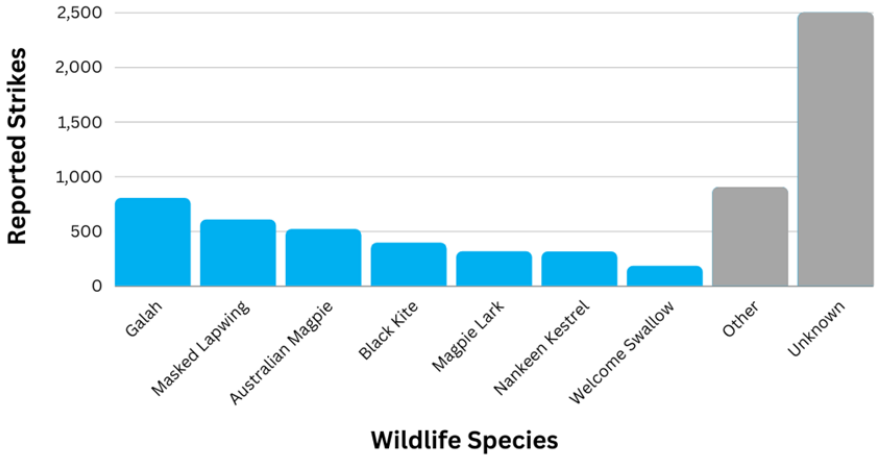
FAA Office of Airports

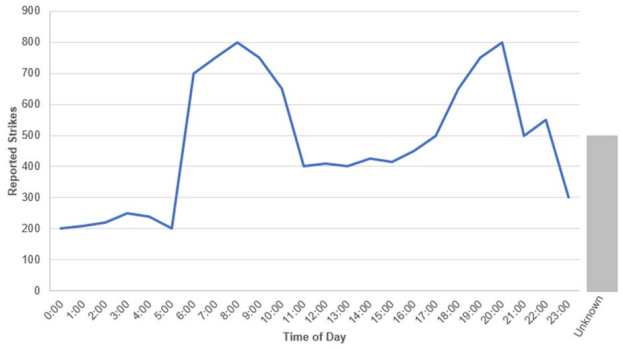


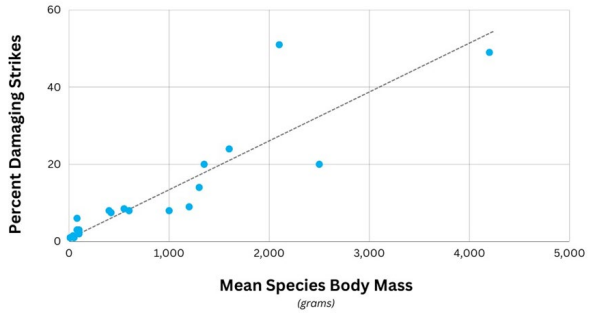
Species Reporting Proportions



Damage Reporting Proportions







2ND ICAO Initiative: (Q4 2024)

International Strike Data Access / Sharing

CHALLENGES: RE: STRIKE DATA FROM ICAO MEMBER STATES

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

CONSEQUENCES: OF INCOMPLETE STRIKE DATA WITHIN MEMBER STATES

- Risk management negatively impacted
- Financial & resource mismanagement
- Program evaluation negatively impacted
- Compliance issues?

2ND ICAO Initiative: (Q4 2024)

International Strike Data Access / Sharing

DATA SHARING at ICAO LEVEL: ACCOMPLISHED HOW?

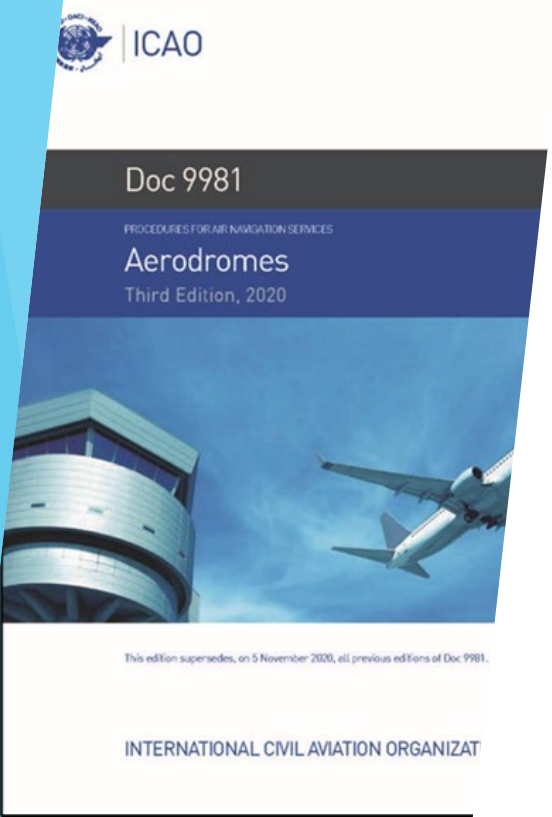
- ICAO makes IBIS data available like other safety data
- ICAO Council votes to allow data access

IBIS DATA ACCESS MIGHT INCLUDE:

- Raw, unfiltered data from each State
- Combined data from all Member States filtered into a single spreadsheet

UNSUCCESSFUL RESULTS MAY INCLUDE:

- IBIS data continues to provide LITTLE TO NO BENEFIT to member States; remains inaccessible and unusable
- ECCAIRS data (prior to submission into IBIS) is still limited to member States using ECCAIRS but may be available upon request. (as would Excel)



JUSTIFICATION TO AMEND JOB CARD ADOP .015.03

Airport Services Manual Part 3 Wildlife Hazard Management **(5th Edition, 2020) Doc 9137**

Procedures for Air Navigation Services - Aerodromes - **(3rd Edition, 2020) Doc 9981**

1. Doc 9137 and Doc 9981 are considered "Airport documents" with limited emphasis on other stakeholders.

2. Strike reporting requires diverse stakeholders; this must be reflected in Doc 9137 by updating:

   Chapter 2. *Stakeholders*

   Chapter 9. *Wildlife hazard mgt program*

3. Doc 9981 Chapter 6 and accompanying Appendices must also be aligned with the guidance in the new IBIS manual.

4. Doc 9137 -Chapter 6 *Advancements in Technology* requires updating for fast-evolving tech (radar systems, UAS's, AAM, etc.) and should reflect SMS terminology provided in Annex 19 - *Safety Management Systems*

Questions?