



We are
Airports

Update on the Manual for Strike Reporting and the IBIS (Doc 9332)

AP-WHM/WG/5

2nd – 5th May 2023
Bangkok, Thailand

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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 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.”

Update the IBIS Manual – Why?

- ✓ Doc 9137 (2020) defined wildlife / aircraft strike but there is no standardized definition of WHAT should be reported as a strike
- ✓ No universal minimum standards for strike report forms
- ✓ New software systems (Excel) available for recording / submitting strike data to ICAO
- ✓ ECCAIRS - aka: the European Coordination Centre for Accident and Incident Reporting system is being updated
- ✓ ALL existing sections of Manual must be fully updated / rewritten; new sections added

Update the IBIS Manual – Why?

- ✓ No guidance re: strike data collection or documentation for Member States
- ✓ No guidance on strike data validation (QC/QA)
- ✓ No guidance on basic data analysis (e.g., why? how? Metrics, KPI's)
- ✓ No guidance standardizing key word usage (e.g., strike=bird strike=birdstrike=wildlife strike?, report vs document, snarge vs remains, etc.)
- ✓ Language issues when querying int'l data
- ✓ Data access extremely difficult

ICAO IBIS Manual (Doc 9332)

3rd edition published 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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MANUAL FOR STRIKE REPORTING AND THE ICAO BIRD / WILDLIFE STRIKE REPORTING SYSTEM (IBIS)

- New Chapters -

- ✓ CHAPTER 1 - BACKGROUND
- ✓ CHAPTER 2 - STATE WILDLIFE STRIKE REPORT COLLECTION
- ✓ CHAPTER 3 - MANAGEMENT OF STRIKE DATA / QUALITY CONTROL / VALIDATION
- ✓ CHAPTER 4 - REPORTING TO ICAO (ECCAIRS, Excel, pdf)
- ✓ CHAPTER 5 - ANALYSING THE DATA



MANUAL FOR STRIKE REPORTING AND ICAO BIRD / WILDLIFE STRIKE REPORTING SYSTEM (IBIS)

- Proposed 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 Visualizations
- ✓ Appendix 5 - Codes for Aircraft by Manufacturer and Model - ICAO Aircraft Codes (DOC8643 Aircraft Type Designators)
- ✓ Appendix 6 - Codes for Engines by Manufacturer and Model
- ✓ Appendix 7 - Codes for Airports - ICAO Airport Codes (DOC7910 Location Indicators)
- ✓ Appendix 8 - Codes for Airlines - ICAO Airline Codes (DOC8585 Operator 3-letter Designators)
- ✓ Appendix 9 - Codes for States, Territories and Oceans
- ✓ Appendix 9- Codes for Birds of the World
 - a. International Ornithological Congress (IOC) Master Bird List
 - b. CRC Handbook Avian Body Masses

IBIS Manual (Doc 9332) WHMEG

DATE	ACTION / GOALS
5/10-11/2021	1 st Meeting (virtual)
9/21/2021	2 nd Meeting (virtual)
3/29/2022	3 rd meeting (virtual)
11/8-10/2022	4 th 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	5 th meeting (in-person) ICAO HQ, Montreal, Quebec, Canada (All Chapters (1-5) and Appendices - ready for edits March 24, 2023)
September 6-8 2023 PROPOSED	6 th meeting (in-person) tentative at or near Vancouver Int'l Airport (All Chapters (1-5) and Appendices – ready for edits August 18, 2023)
Q4 2023 (11/1/2023)	ADOP.015.03-ICAO-IBIS Manual (Doc 9332) must be completed Q4 2023 (November 1, 2023)

2ND ICAO Initiative:

International Data Access / Sharing

CHALLENGES: Re: Strike Data From ICAO Member States

- ✓ IBIS DATA UNAVAILABLE / INACCESSIBLE
- ✓ STRIKE DATA INCOMPLETE / INACCURATE FOR MOST STATES
- ✓ MUST USE ECCAIR SYSTEM TO ACCESS INDIVIDUAL NATION'S DATA IF THEY USED ECCAIRS

CONSEQUENCES: Of Incomplete Data Within Member States

- ✓ RISK MANAGEMENT NEGATIVELY IMPACTED
- ✓ FINANCIAL MISMANAGEMENT
- ✓ PROGRAM EVALUATION NEGATIVELY IMPACTED
- ✓ MAY RESULT IN AERODROMES BEING OUT OF COMPLIANCE

2nd ICAO Initiative

International Data Access / Sharing

ACCOMPLISHED HOW?

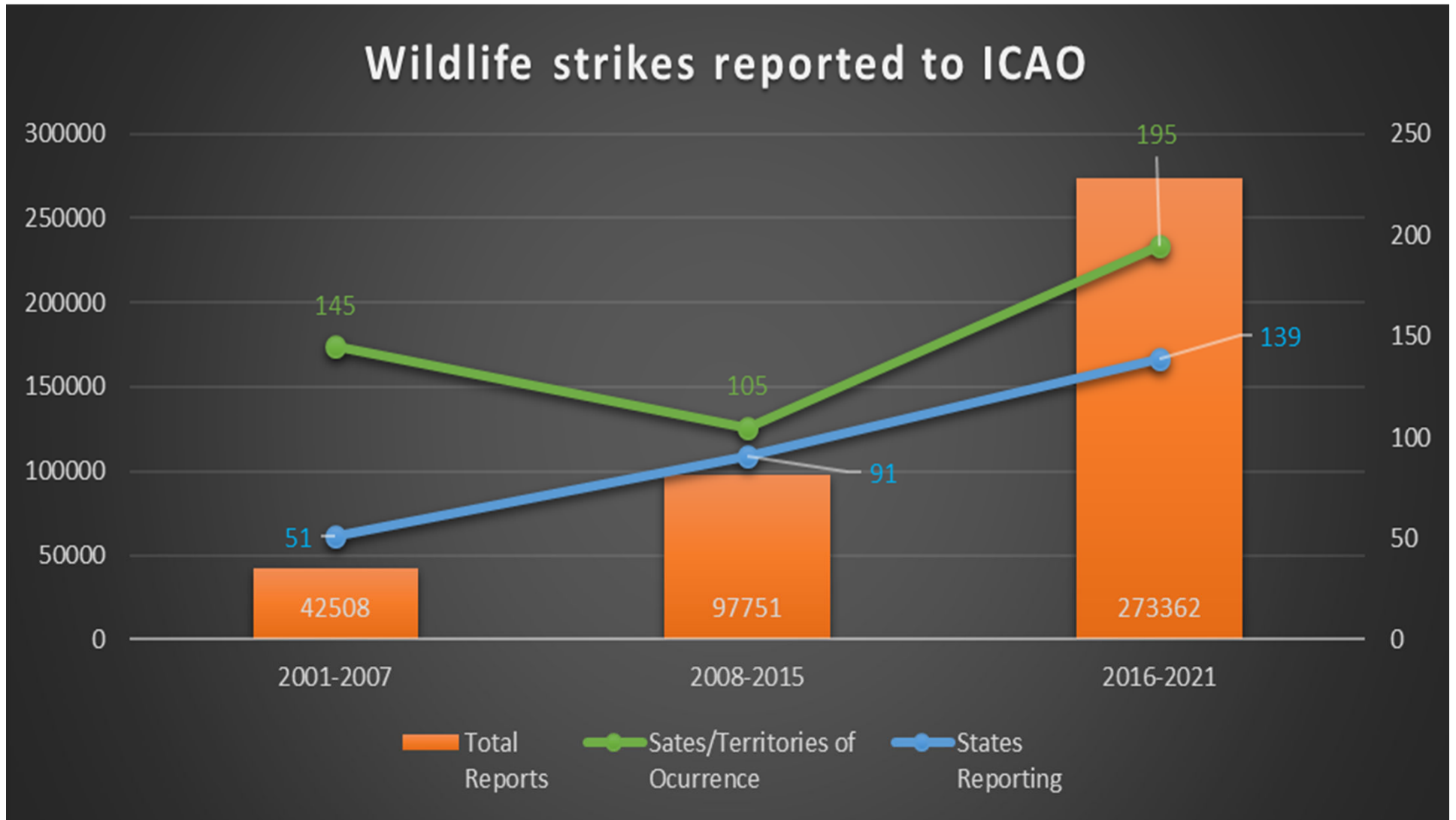
DATA SHARING SUCCESS MAY INVOLVE:

- ✓ Nations Submitting Strike Data (to IBIS) Agree to Allow Access to Participating Countries OR to the Public
- ✓ ICAO Council Votes to Allow Data Access

UNSUCCESSFUL RESULTS MAY INCLUDE:

- ✓ Access Is Still Limited to Nations Using ECCAIRS
- ✓ Access to ECCAIRS Data Available Upon Special Request
- ✓ Continue Contacting Individual Nations for Strike Data

ICAO: REPORTING WILDLIFE STRIKES INTO IBIS 2016-2021 (Strikes vs Locations)

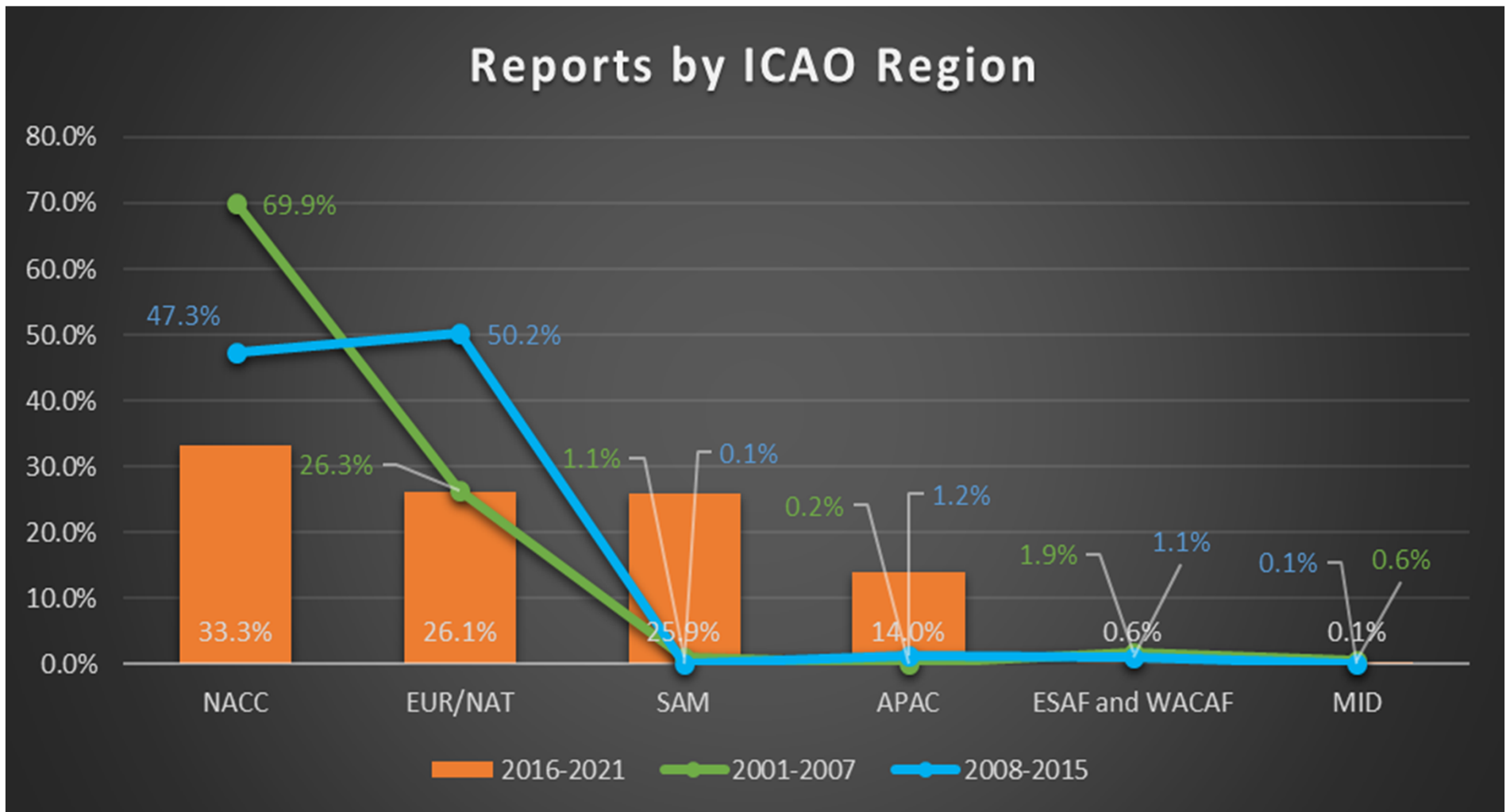


ICAO: REPORTING WILDLIFE STRIKES INTO IBIS 2016-2021

Wildlife strikes reporting States distributed by ICAO Region
(6 year totals and % of Strikes Submitted to IBIS)

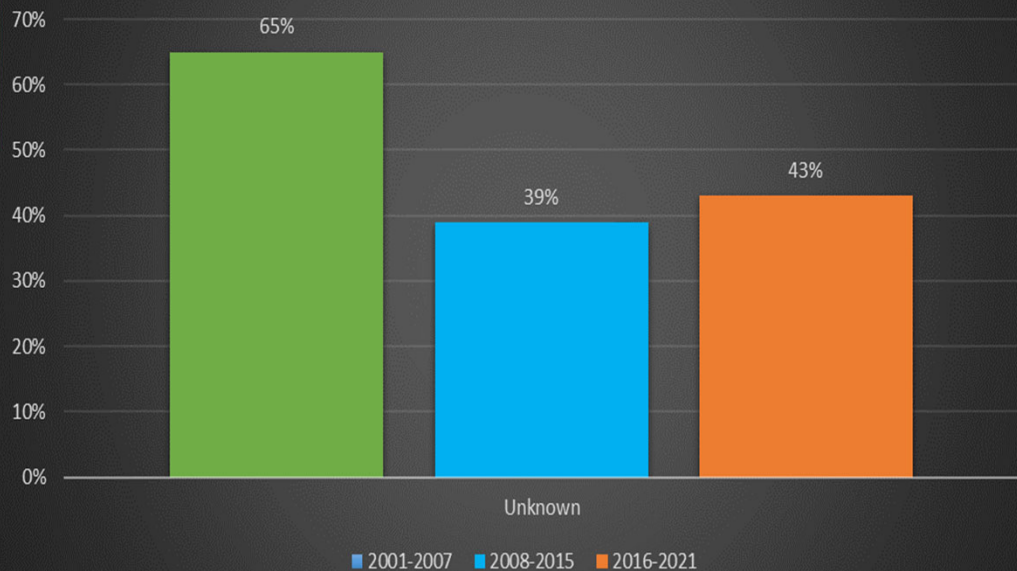


ICAO: REPORTING WILDLIFE STRIKES INTO IBIS 2016-2021 COMPARED TO PREVIOUS ANALYSES FROM 2001 - 2015



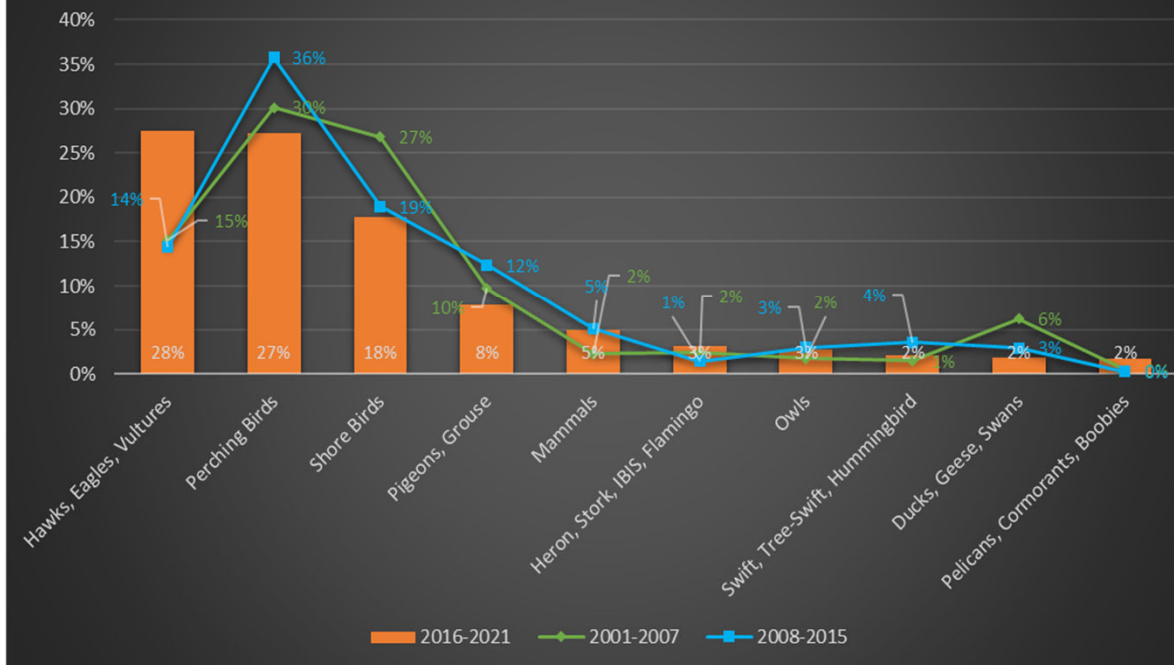
UNKNOWN IBIS WILDLIFE STRIKES 2016-2021

Reports by Wildlife Species (classified as Unknown)



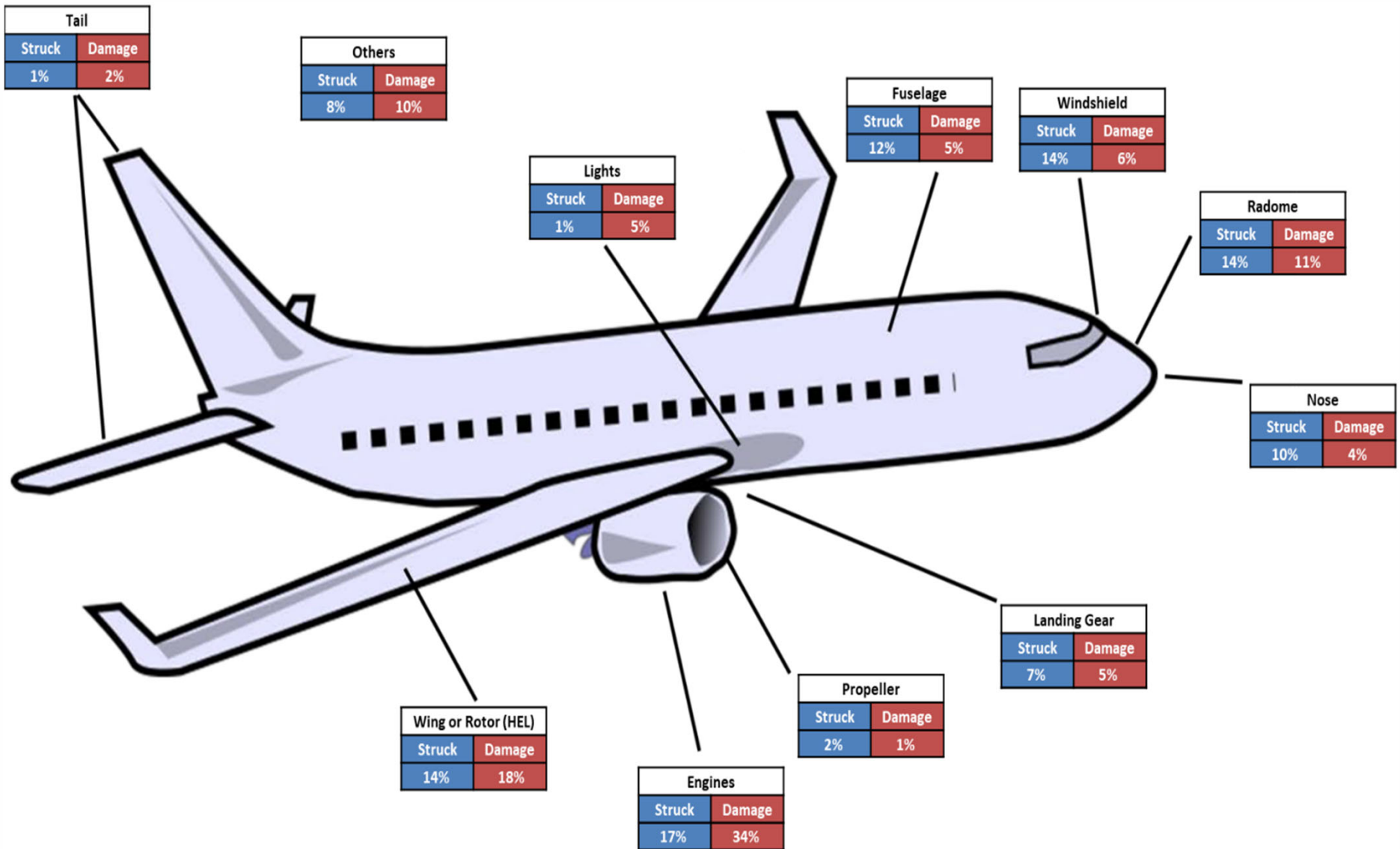
SPECIES GROUPS

Reports by Wildlife Species



IBIS WILDLIFE STRIKES 2016-2021

Parts of Aircraft Struck and/or Damaged



IBIS STATISTICAL ANALYSIS FOR THE YEARS 2016-2021

WILDLIFE STRIKE SUMMARY

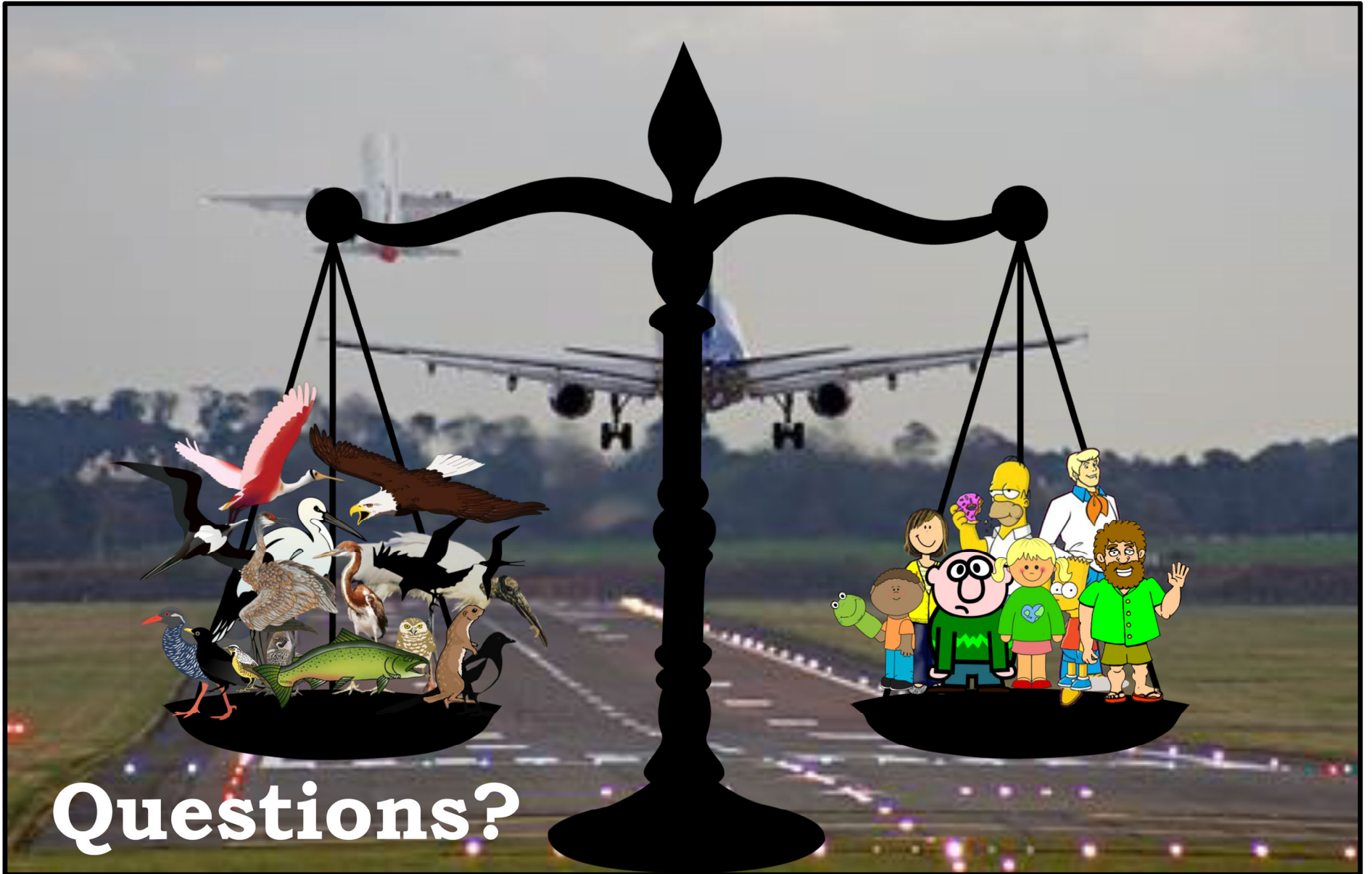
<i>Data</i>	2001-2007	2008-2015	2016-2021
<i>States reporting</i>	51	91	139
<i>States/territories of occurrence</i>	145	105	195
<i>Strikes reported</i>	42 508	97 751	273 362
<i>Day time strikes</i>	63%	68%	68%
<i>Night time strikes</i>	24%	25%	19%
<i>Peak month activity</i>	12% (August)	14% (August)	12% (July and August)
<i>Strikes during takeoff</i>	39%	31%	24%
<i>Strikes during approach</i>	37%	33%	23%
<i>Strikes during landing</i>	17%	25%	23%
<i>Wildlife specie most frequent</i>	Perching birds	Perching birds	Hawks, eagles and vultures
<i>Part struck most frequent</i>	Engines and Radome	Engines and Radome	Engines and Radome
<i>Part damage most frequent</i>	Engines and Wing/Rotor	Engines and Wing/Rotor	Engines and Wing/Rotor

IBIS STATISTICAL ANALYSIS FOR THE YEARS 2016-2021

SUMMARY OF CHALLENGES

- Not all States contribute as per Annex 14 (9.4)
- Lack of data quality
(insufficient oversight, differing priorities, language effect, differing file format, etc.)
- Lack of contact point/responsible person = No dedicated wildlife strike data person
- COVID-19 pandemic period (2019-2021)
- Data from ECCAIRS provides only 14% of total data
- Insufficient capabilities of ECCAIRS
- Majority of data is gathered by ICAO direct request from State's POC = Inefficient and labor intensive

Questions? Preguntas?



Questions?