



We are
Airports

The Data Delirium Bird / Wildlife Hazards Cont'd...

**North American Bird Strike Conference
Halifax, Nova Scotia, Canada
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FAA
Office of Airports

QUALITY ASSURANCE WILDLIFE STRIKE DATA

INTERNATIONAL CONSISTENCY

REPORTING PHASE (e.g., 94 possible data fields on US Strike Report Form)

- Similar reporting knowledge
- Similar data: Date, time, aircraft, weather, location geographically, altitude, location on aircraft, phase of flight, damage, cost, species, number struck, etc...

INTERNATIONAL INCONSISTENCY

DATA MANAGEMENT PHASE

- Quality control / validation – data scrubbing
- Time / effort / funding / dedicated personnel
- No international consistency for minimum effort

*** garbage in = garbage out

The Data Delirium

what did Nick say?

INTERNATIONAL DATA SHARING IS BAD

so we can infer?

**CONSISTENCY OF REPORTING WITHIN A
COUNTRY IS BETTER THAN REPORTING
BETWEEN COUNTRIES**

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

- 🇺🇸 USA strikes – birds (550 species; 97% of all strikes); terrestrial mammals (44 species); bats (26 species); reptiles (20 species)
- 🇺🇸 Strike reporting increased from 1,850 in 1990 to a record **16,020** in 2018
- 🇺🇸 **44** strikes reported / day (<5% = damaging and decreasing)
- 🇺🇸 70,000 flights per day, 25 million+ per year = 1 strike / 1,591 flights or 1 damaging strike / 35,000 flights
- 🇺🇸 82% of strikes occur <1,500 ft AGL - these strikes are within the 5 mile separation distance for attractants and can be successfully mitigated



Photo: Thomas Yin – BWI CAGO strike

- Multiple strike reports for a single strike event = improved Outreach
- Decrease in average bird size involved in strikes = improved Safety & Outreach
- Bird identification high of 60% (2014 – 2018) = improved Wildlife Programs
- Damaging strikes declined since 2000 for commercial aircraft in the airport environment (<1,500 feet [AGL] - but have not declined for GA aircraft
- A record 714 airports reported strikes in 2018 (423 Part 139 airports and 291 GA airports). Overall, 2,047 airports have reported strikes



“Strikes are rare events, that happen every day”

INTERNATIONAL STRIKES



US Data (reliable): **28 years** = 3,864 strikes involving US registered civil aircraft were reported at 308 foreign airports in 109 countries (1990 – 2017)



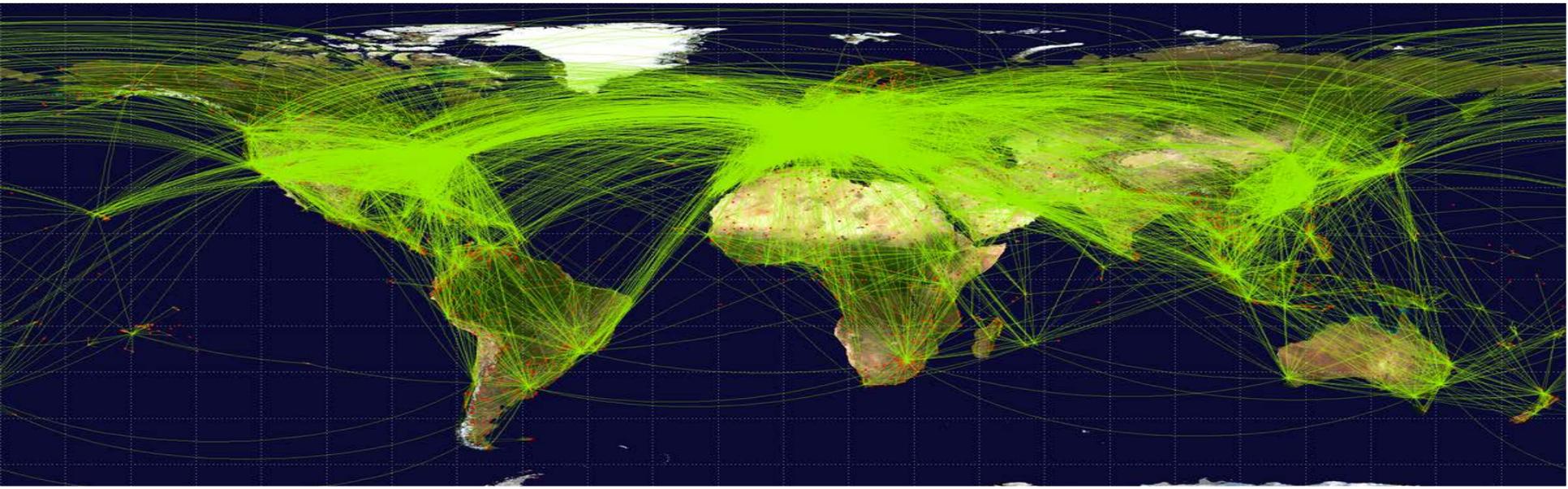
US Data (reliable): **5 years** = 1,020 bird/wildlife strikes with US registered aircraft outside of US airspace (2014 – 2018)



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



ICAO IBIS Data (inaccurate): 2008 - 2015 WILDLIFE STRIKE ANALYSES (IBIS) received 97,751 reports from 91 States occurring in 105 States and territories



US Strike Data: Quantity & Quality of Data Increasing

Richard Dolbeer Strike Data Evaluations (2009-2013) & (2004-2008)



DATA SHARING: US & UK

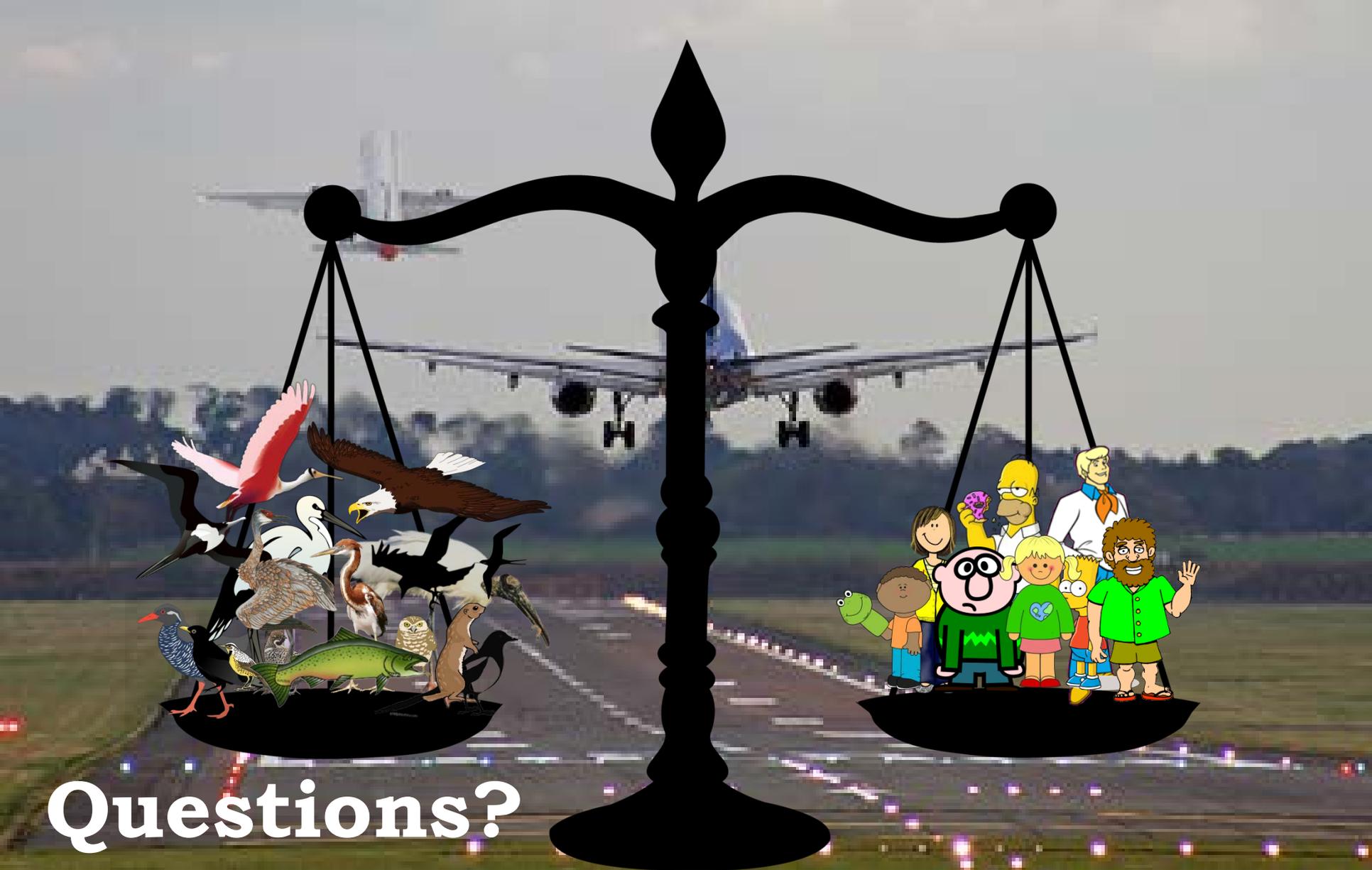
- Preliminary analysis shows incomplete strike recording and deficient data sharing
- US and UK will conduct new gap analysis on international strike data
- Explore avenues of improved data sharing (e.g., quarterly/annual data transfers, 1-stop reporting populates two data sets, etc.)

INTERNATIONAL STRIKE DATA - THOUGHTS

ICAO

- Needs to allow data access of the IBIS information for all nations
- ICAO established ECCAIRS as standard strike reporting system but strike report form standards are outdated (1989) and no quality assurance of data mgt
- Needs to create reliable / accurate strike report every 2-10 years to monitor trends
- Need to update Manual on the ICAO Bird Strike Information System (IBIS) Third Edition—1989 (Doc 9332-AN/909)
- Expanded international training on strike reporting / data mgt needed





Questions?



FAA
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