*International Civil Aviation Organization*

Sixth Meeting of the Asia/Pacific Wildlife Hazard Management Working Group (AP–WHM/WG/6)

*Bangkok, Thailand, 14 to 17 May 2024*

**Agenda Item 3:    Global, Regional and National Guidance/Best Practices on Wildlife Hazard Management**

**PROGRESS OF THE ICAO BIRD STRIKE INFORMATION SYSTEM (IBIS)**

(Presented by the Secretariat)

**SUMMARY**

This paper presents an overview on progress of the ICAO Bird Strike Information System (IBIS).

## 1.    INTRODUCTION

1.1        The ICAO Birdstrike Information System (IBIS) Manual Doc 9332 (3rd edition published 1989) has not been updated in over 30 years.  Two related, but separate initiatives were proposed to ICAO in 2000.  The first proposed to update the ICAO Birdstrike Information System (IBIS) manual while the second proposed to allow / enhance international data access and data sharing. The goal was simple, enhance global aviation safety by improving member State reporting of wildlife/aircraft strike incidents and the submission of that data into IBIS as well as identifying and/or improving pathways to that data.

1.2        The job card ADOP.015.03 was formalized on 2 February 2021 and its deadline was Q4 2023 following an extension due to COVID-19.  Advancements in data collection and reporting technologies require that the IBIS manual be completely reorganized, amended and reworked in its entirety.  The Wildlife Hazard Management Expert Group (WHMEG) focused its efforts to aid individual member States with not only the submission of strike reports to the IBIS (as per Annex 14, ch. 9.4.2) but with the collection, analysis and utilization of those strike data (as per Annex 14, ch. 9.4.1).

## 2.    DISCUSSION

Database management

2.1        Since 2022, ICAO has initiated a series of improvements related to the management of the IBIS database. These improvements are related to IBIS Focal Points list and process of data collection and the main goal is to prepare the transition period to the new Doc 9332 - IBIS Manual.

2.2        The IBIS Focal Points list has been updated with the support of ICAO Regional Offices and the overall mark of 66% of States with nomination of IBIS Focal Points for all ICAO regions has been reached. ICAO has established a closer contact with those responsible for collecting data in each State (see Figure 1).
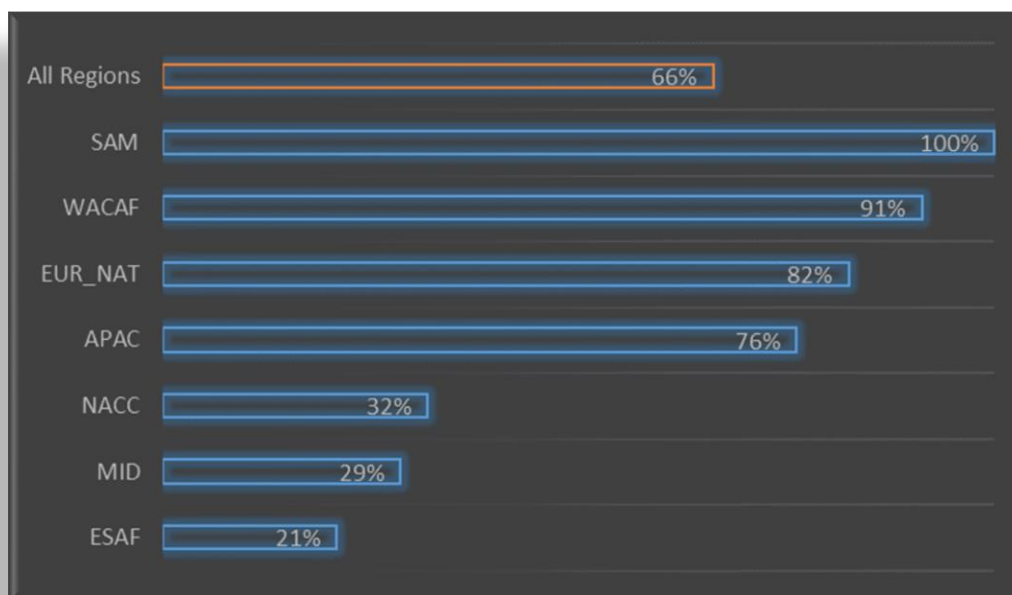
**Figure 1 – IBIS Focal Points by ICAO Region**

2.3          As majority of States do not use ECCAIRS, it has been developed a new Excel Template (based on ECCAIRS format) to collect reports in a standardized format from those States. That template improves data quality and reduces processing time. ICAO has also changed the deadline to a single submission per year (see Figure 2).
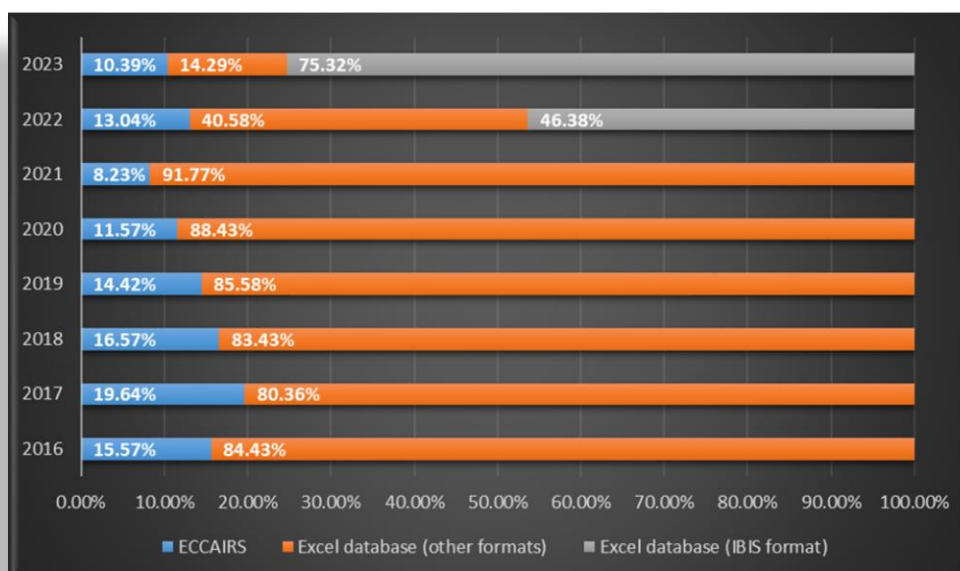


**Figure 2 – Improvements on process for data collection**

2.4          The above mentioned improvements resulted in a better distribution of the reports. The first (2001 to 2007) and second (2008 to 2015) data periods demonstrated a strong concentration of around 96 per cent of the reports in the NACC and EUR/NAT regions. The distribution of reports of the third data period (2016 to 2021) is a more realistic account of the traffic movements vis-à-vis the

number of wildlife strikes in each ICAO Region. This is a result of all the efforts made by both ICAO and States in collecting the data (see Figure 3).
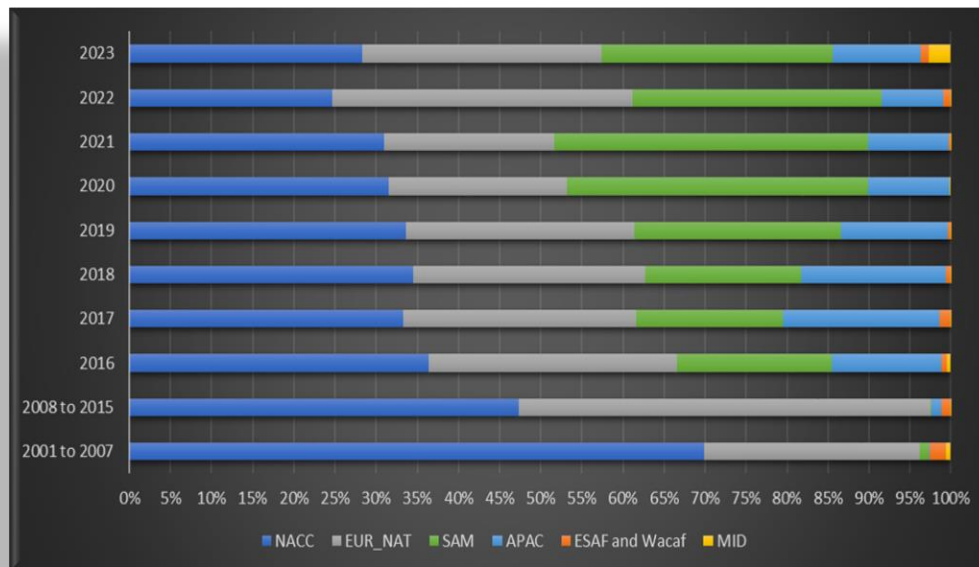


**Figure 3 – Improvements on reports distribution (more balanced)**

2.5            The total number of reports over the years has also significant increased as a result of all the efforts made by both ICAO and States in collecting the data (see Figure 4).
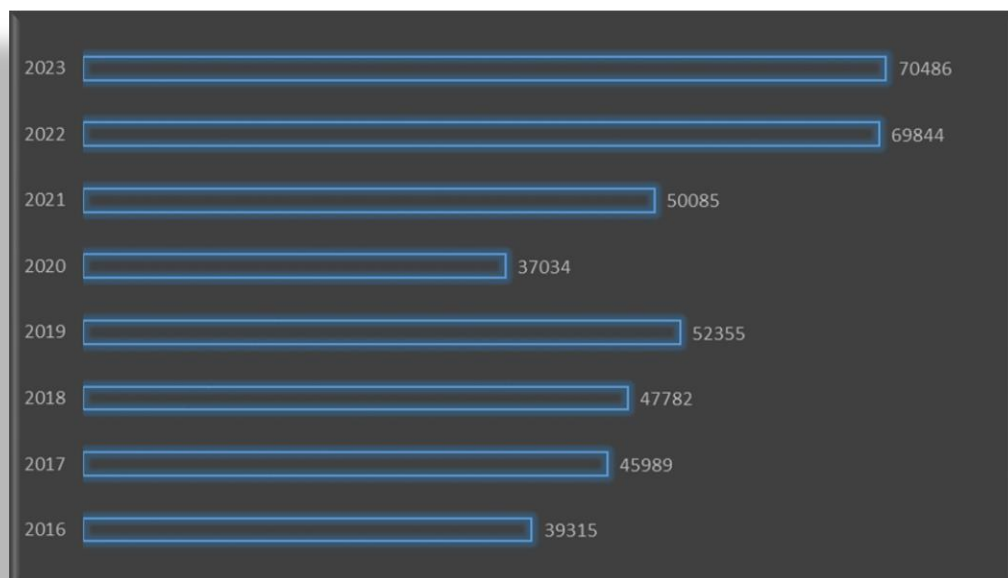


**Figure 4 – Improvements in the total number of reports**

2.6            In terms of deliverables, all over the years three electronic bulletins has been published by ICAO containing a high-level information (see Figure 5). However, ICAO is evaluating options for sharing the data with the aviation community, providing dynamic (see Figure 6) and raw data.
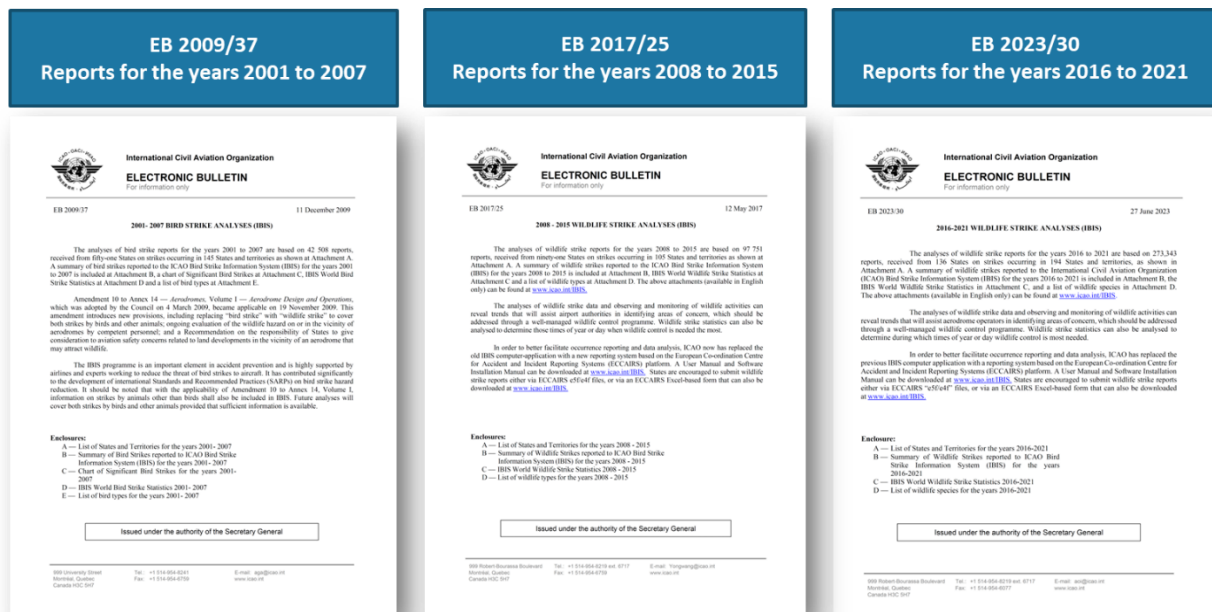
**Figure 5 – Periodic Electronic Bulletins (EB) Since 2001**



**Figure 6 – Providing dynamic data (dashboard under development)**

The New Doc 9332 - IBIS Manual

2.7        The IBIS manual Doc 9332 (3rd edition published 1989) included three chapters on: 1) Reporting; 2) Analyses of Bird Strike Reports and; 3) Computer Storage of Bird Strike Reports.

2.8        The WHMEG developed five new chapters that provided guidance for a broad range of needs for Member States:

a) CHAPTER 1 - INTRODUCTION / BACKGROUND / PHILOSOPHY

b) CHAPTER 2 - INTERNAL STRIKE REPORT COLLECTION

c) CHAPTER 3 - MANAGEMENT OF STRIKE DATA / QUALITY CONTROL

d) CHAPTER 4 - REPORTING TO ICAO

e) CHAPTER 5 - ANALYSING THE DATA

2.9         In the current IBIS manual Doc 9332 (3rd edition published 1989), there was little to no discussion concerning the "why" behind the reporting of wildlife / aircraft strikes nor the who, what, when, where and how.  The guidance focused primarily on the strike report form and submissions to IBIS. More recently, formats and capabilities of the ICAO-preferred ECCAIRS reporting system, on-line data access and Excel spreadsheets have been greatly improved.  New guidance is needed for using these systems to collect, analyse, summarize and query as well as the submission of the strike data to ICAO each year.

2.10        Many States lack a foundational understanding of wildlife / aircraft strikes including what should be reported as a strike, how to safely collect strike evidence, strike remains identification, what analyses are beneficial and how best to conduct those analyses of strike data.  Additional guidance was included into the updated IBIS manual concerning data validation (e.g., quality control / quality assurance) of a State's strike database, the benefits and restrictions between paper and electronic formats, data presentation and publishing a State's report on strike summaries.
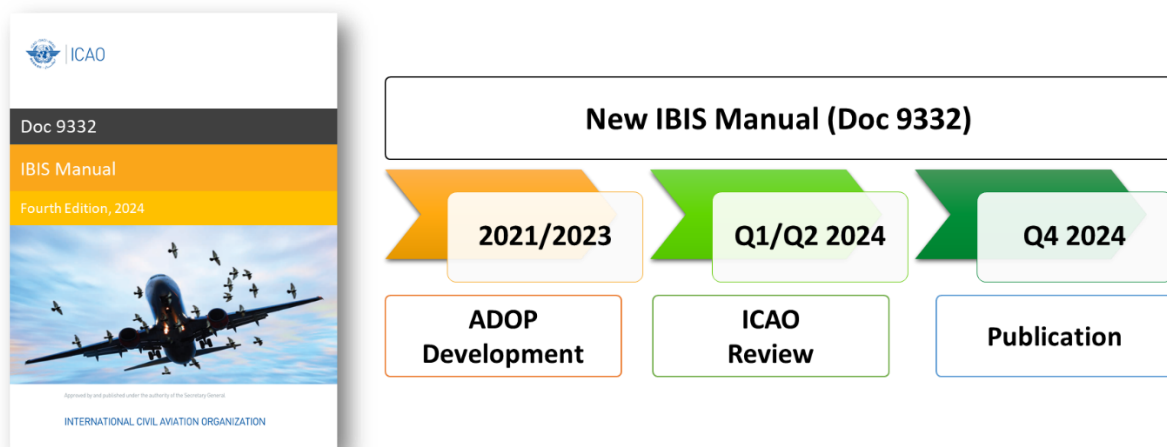


**Figure 7 – Deadlines for the publication of new Doc 9332 – IBIS Manual**

2.11        The second proposed initiative to enhance international data access has a current deadline of Q4 2024. Data access within the IBIS is not an option because it is designed to be a repository of State strike data and does not currently allow any level of access or query.  Also, prior to ADOP.015.03, ICAO identified ECCAIRS as its preferred data collection system for submission of strike data to IBIS yet the predominance of users come from European States.  Strike data access from most ICAO Member States is simply unavailable or inaccessible when the query originates from outside the ECCAIRS system.  Users within ECCAIRS also experience difficulties requesting permission to access strike data and ultimately find the data of limited value due to language barriers and syntax / grammatical differences.

2.12          The solution to allow readily accessible data for ICAO's Member States may be simpler than anticipated.  Most strike data received into the IBIS is submitted using ECCAIRS or Excel formats. This data is merged into an Excel format to allow data analyses.  This international wildlife strike database allows ICAO to periodically publish Electronic Bulletins that provides a high-level overview of international strikes. Resolution of the second initiative could likely involve permission for Member States to access this particular combined raw data set.
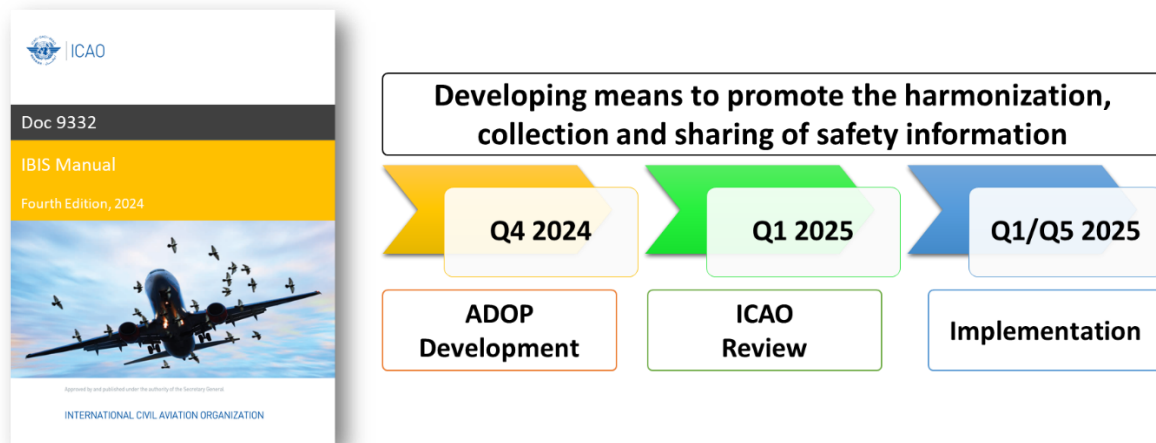
**Figure 7 – Deadlines for the second proposed initiative to enhance international data access**

## 3.          ACTION BY THE MEETING

3.1          The meeting is invited to:

a)    note the information contained in this paper; and

b)    discuss any relevant matters as appropriate.

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