Latest developments of ICAO on Wildlife hazard reduction

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Latest developments of ICAO on Wildlife hazard reduction

Yong Wang
Chief, Aerodromes Section, ANB/ICAO
12 September 2011
2011 Bird Strike North America Conference
Bird Strikes – an Increasing Safety and Economic Concern

Bird strikes are an increasing safety and economic concern, annually costing commercial air carriers over $1.2 billion USD.

Learjet 45 strike with pigeons at Linate Airport, Italy, June 2003. Aircraft and building destroyed, two pilots killed.

Why?:
1. Increasing populations of large- and flocking- bird species.
2. Faster quieter turbofan-powered aircraft.
3. Non Bird Strike resistant airframes and engines, relative to large- and flocking-bird species.
Power of Birds
Overview

- ICAO bird strikes analysis (IBIS)
- Amendment 10 to Annex 14, Volume I
ICAO Bird Strikes Analysis (IBIS)

States/Territories of Occurrence

<table>
<thead>
<tr>
<th>States Reporting</th>
<th>S1</th>
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<tr>
<td>145</td>
<td>51</td>
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Reported Strikes Distributed by Region in Which They Occurred

<table>
<thead>
<tr>
<th>Region</th>
<th>Strikes</th>
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<tbody>
<tr>
<td>SAM</td>
<td>332</td>
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<tr>
<td>ASIA/PAC</td>
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<td>EUR/NAT</td>
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<tr>
<td>NAM</td>
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<td>CAR</td>
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<td>AFI</td>
<td>584</td>
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<tr>
<td>MID</td>
<td>198</td>
</tr>
</tbody>
</table>
When and Where the Bird Strikes Occurred

When and where the bird strikes occurred

Time of the strikes

Chart 1: strikes reported according to time

Chart 2: strikes reported according to season

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Bird Strikes Reported According to Flight Phases

![Chart 3: Bird strikes reported according to flight phases](image)
Bird Types Frequently Struck

- **Passerines**: 31%
- **Birds of Prey**: 15%
- **Gulls**: 18%
- **Pigeons**: 10%
- **Waterfowls**: 6%
- **Plovers**: 3%
- **Herons & Pelicans**: 4%
- **Others**: 13%

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Effects on Flight

Chart 6: effects on flight, if any
Parts of Aircraft Struck and Damaged

Chart 6: parts of aircraft struck or damaged

Chart 7: parts of aircraft struck and damaged
9.4 **Wildlife** strike hazard reduction

**Note.**—*The presence of wildlife (birds and animals) on and in the aerodrome vicinity poses a serious threat to aircraft operational safety.*
Strike by Animals Other than Birds

December 2002
Dash 8 landing at Airport in North Carolina hit White-tailed Deer

Impact collapsed nose gear

Nobody wins when wildlife are tolerated at airports

Professional programs to manage wildlife hazards at airports benefit both aviation and wildlife!

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Alligator Alert at Orlando International Airport, USA 2001
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...

b) the collection of information from aircraft operators, aerodrome personnel....

c) an ongoing evaluation of the wildlife hazard by competent personnel.
9.4.3 Action shall be taken to decrease the risk to aircraft operations by adopting measures to minimize the likelihood of collisions between wildlife and aircraft.
9.4.4 The appropriate authority shall take action to eliminate or to prevent the establishment of garbage disposal... unless an appropriate wildlife assessment indicates that they are unlikely..... Where the elimination of existing sites is not possible, the appropriate authority shall ensure that any risk to aircraft posed by these sites is assessed and reduced to as low as reasonably practicable.
• 9.4.5 Recommendation.— States should give due consideration to aviation safety concerns related to land developments in the vicinity of the aerodrome that may attract wildlife.

(it was a Note before)
Doc 9137 - AN/901
Part 3

Airport Services Manual
Part 3
Wildlife Control and Reduction
Fourth Edition - 2011

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What’s New in ASM, Part 3

- Guidance dealing with wildlife other than birds
- Risk assessment of bird/wildlife strikes
- Best practices for bird/wildlife management programmes on airports
- Emerging technology and communications procedures
- ...

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Thank you