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Risk Fauna Management In Mexico: Accomplishments in ASA airports

Magdalena Colunga
Aeropuertos y Servicios Auxiliares in Mexico, magdalena.colunga@asa.gob.mx

Jorge García-Burgos
Aeropuertos y Servicios Auxiliares in Mexico

Arturo Ortiz
Aeropuertos y Servicios Auxiliares in Mexico, aortizg@asa.gob.mx

Norma Fernández-Buces
Aeropuertos y Servicios Auxiliares in Mexico, norma@selome.com.mx

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Risk Fauna Management In Mexico: Accomplishments in ASA airports

Magdalena Colunga, Jorge García-Burgos, Arturo Ortiz, Norma Fernández-Buces

September, 2011
Introduction

Aeropuertos y Servicios Auxiliares (ASA) is an independent government agency. The main functions of the organization are to design, build and operate airports, as well as 62 fuel farms.

Since 1965, ASA has contributed to the building of the airport industry in Mexico. ASA is responsible of providing a safe, secure, efficient service, and environmental concerns.
Airports

• Until 1998, ASA operated 63 airports in the Mexican Airport System.

• Currently, ASA operates 18 airports and participates as a partner in other five.

• 15 airports have a Wildlife Hazard Management Program.
Reporting wildlife strikes in Mexico

- Increase in the number of incidents
- Mexico has participated in the Bird Strike Committee USA-Canada Conferences since 1997
Wildlife Hazard Management Program

FAA-USDA Manual "Wildlife Hazard Management at Airports"

Wildlife Hazard Assessment

Appendix K Wildlife Hazard Management Plan Evaluation

Training for airport personnel

Implementation of wildlife control strategies and techniques

Wildlife Hazard Management Plan

Evaluation
Airport Datasheet

**Ficha técnica**

**Datos Generales**
- Nombre: Aeropuerto Internacional de Cd. Obregón
- Designador: CEN
- Categoría: V
- Clasificación: Internacional
- Tipo: Regional
- Superficie: 365.6 ha

**Pistas**
- Número de pistas: 1
- Tipo de pavimento: Asfalto
- Longitud: 13-31
- Dimensión: 2,300 x 45 m
- Capacidad (ops. x hora): 20

**Rodajas**
- Rodaje: Alfa de 370 x 23 m
- Tipo de pavimento: Asfalto
- Longitud: Bravo de 215 x 23 m
- Tipo de pavimento: Concreto

**Plataforma Comercial**
- Superficie: 17,325 m²
- Tipo de pavimento: Concreto Hidráulico
- Número de posiciones: 3

**Plataforma de aviación general**
- Superficie: 10,640 m²
- Tipo de pavimento: Asfalto
- Número de posiciones: 18

**Edificio terminal comercial**
- Superficie total: 4,069.17 m²
- Capacidad (pas. x hora): 600

**Datos operacionales**
- Horario de operación: 06:00 a 18:00 hrs.
- Avión máximo operable: Boeing 757

**Aeropuertos y Servicios Auxiliares**

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**SAAB-340** (Aeroméxico)

**ERJ-145** (Aeroméxico)

**LET-410** (Aeropacífico)

**Cessna-208** (Aerocalafia)
Recognizing hazardous wildlife attractants on or near airports

PERIMETER A:
For airports serving piston-powered aircraft, hazardous wildlife attractant must be 5,000 ft from nearest aircraft movement area.

PERIMETER B:
For airports serving turbine-powered aircraft, hazardous wildlife attractant must be 10,000 ft from nearest aircraft movement area.

PERIMETER C:
5 Mile range to protect Approach, Departure and Circling Airspaces
Attractive sites for hazardous wildlife near airports
Identification of attractive sites on airports
Airport vegetation and zonation (TPQ)
Airport zonation
Hazard assessment

Hazard level: 1) size, 2) number of organisms, 3) behavior in relation to aircraft, 4) likelihood of being in the path of an aircraft and 5) strike records

<table>
<thead>
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<th>Hazard level</th>
<th>Value</th>
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<td>Very High</td>
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<tr>
<td>High</td>
<td>3</td>
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<tr>
<td>Medium</td>
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<td>Low</td>
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<td>Undetermined (ND)</td>
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<th>Airport</th>
<th>Species</th>
<th>Very High</th>
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<td>9</td>
<td>11</td>
<td>17</td>
<td>77</td>
<td>13</td>
<td>0</td>
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<tr>
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Wildlife Distribution

- 62% Birds
- 16% Mammals
- 9% Arthropods
- 11% Reptiles
- 11% Amphibians
### Endangered or threatened species

<table>
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<tr>
<th>Airport</th>
<th>NOM-059-SEMARNAT-2010</th>
<th>IUCN</th>
<th>CITES</th>
<th>Total</th>
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<tr>
<td></td>
<td>Official list of species under conservation</td>
<td>Critically Endangered</td>
<td>I</td>
<td>II</td>
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<td>1</td>
<td>1</td>
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</table>

**IUCN** = International Union for the Conservation of Nature.  
**CITES** = Convention on International Trade in Endangered Species of Wild Fauna and Flora

**SEMARNAT:** Ministry of Environment and Natural Resources
Hazardous Species

CTM

CVM

UPN
Stage 1
Habitat & infrastructure Management

- Vegetation management
- Retention pond management
- Fencing improvement
- Wildlife deterrence
- Animal carcasses management

Stage 2
Implementation of wildlife control strategies

- Wildlife capture and relocation
- Reproductive control
- Lethal control
Stage 1. Wildlife and habitat monitoring
Stage 1. Wildlife Monitoring

- Monitoring and record for data base
- Empty nest removal
- Fence survey
Stage 1. Fencing improvement
Stage 1. Net placement (TPQ)
Stage 1. Trap Camera monitoring
Stage 1. Management of habitat and food sources

- Empty nest removal
- Runways sweeps
- Animal carcasses management
Stage 2. Management, control and relocation of wildlife
Stage 2. Management, control and relocation of wildlife

Nilgai (Bocelaphus tragocamelus)
Monitoring records
# Monitoring records

![Monitoring records](image.png)
Monitoring records

Tórtola roja (*Columbina talpacoti*)

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</tr>
</tbody>
</table>

≥7≤30 Ejemplares (tercer cuartil a máximo)
≥6<7 Ejemplares (mediana al tercel cuartil)
≥4<6 Ejemplares (primer cuartil a mediana)
≥1<4 Ejemplares (mínimo al primer cuartil)
Geographical Information System

- Airport zoning
- Airport vicinity
- Vegetation and land use
- Attractive sites for hazardous wildlife
- Risk map

Worldwide Satellite Sensor
Training and awareness

• Since 2005, ASA has trained over 400 airport personnel in the 15 ASA airports.
• ASA has developed special training and awareness workshops for the Aeronautical Authority, airlines and the local community, including children.
New Palenque Airport (PQM)
Conclusions

- Mexico has improved greatly in Wildlife Hazard Assessment, Control and Management.

- In Mexico, it is important to promote the participation of pilots, traffic controllers, airlines, aircraft manufactures and maintenance personnel as well as Aeronautical Authorities in the report strikes.

- The database is critical to justify the presence of qualified biologists trained in wildlife damage control.
Thank you for your attention!

Magdalena Colunga García Marín
magdalena.colunga@asa.gob.mx
Arturo Ortiz Guerrero
aortizg@asa.gob.mx
Norma O. Fernández Bucex
norma@selome.com.mx