Agenda

- Why Wildlife Control and Habitat Management?
- Responsibilities
- Operational Safety
- 3 Steps to an efficient Habitat Management
- Main Problem in Europe
- Frankfurt Airport
- Examples
Risk: Bird strike (flock of pigeons)

Bird Incidence
Mammals „attack“

Why Wildlife Control and Habitat Management?

Main Target:
Saving lives and avoiding costs - by
Reducing Risks and Dangers from Biological Impacts on Aviation

• Collision of birds with aircraft („Bird Strike“)
• Collisions of animals with aircraft or other vehicles on the ground
• Absorbing of animals or plants by aircraft turbine engines (swarm of insects, grasshoppers)
• Digging up of aviation areas by animals that could lead to irruptions of aircraft or movable equipment into the ground
Responsibilities

- ICAO: Aerodromes, Annex 14, Vol. 1, Chapter 9
- ICAO: Airport Planning Manual (ICAO DOC 9184), Part 2, Land Use and Environmental Control, Appendix 2:
- ICAO: Airport Services Manual (Doc 9137), Part 3 - Bird Control and Reduction, Appendix 1:

The airport operator is responsible to manage and set up a management plan of the biosphere influencing the airport (wildlife hazard assessment).

➢ Generally, in case of disregard the airport operator is responsible for accidents and insurance companies of airlines will ask for reimbursement.

Effecting operational safety at airports

Vicinity:

- Approach and climb-out areas

<table>
<thead>
<tr>
<th></th>
<th>Airfield</th>
<th>Airport vicinity</th>
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<tbody>
<tr>
<td>Landing</td>
<td>200 ft. and lower</td>
<td>1000 – 200 ft.</td>
</tr>
<tr>
<td>Departure</td>
<td>up to 500 ft.</td>
<td>500 – 1500 ft.</td>
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On airport:

- Building infrastructure (nesting, sleeping / technical, hygienic problems)
- Apron, runways, taxing ways, roads, parking positions, lightning (from greeneries to concrete: drying, warming up, chasing)
Step 1 to an efficient Habitat Management

Keeping complete and regular Statistics on:

- Accidents
- Incidents
- Appearance of species esp. birds (Continuous observation of birds for years)
- Biology/habits of these species

Exchanging experiences

Use of scientific results

Vicinity of the airport (Bird strike)

Planning and land-use zoning:
Land uses may be graded in two areas, Area A and B surrounding an airport. These Areas are arrived at by describing two concentric circles (radii 3 and 8 km respectively) around an airport, centered on the Airport Reference Point. Any land use, which has the potential for attracting birds to the airport vicinity, should be the subject of a study to determine the likelihood of bird strikes to aircraft using the airport.

Agriculture (eg. landscape nurseries, stock farming, fruit tree farming)
Wildlife Sanctuaries (game reserves)
Recreational (golf courses, parks, playgrounds, athletic fields, riding trails)
Commercial (offices, retail sales, hotels and motels, restaurants, warehouses shopping centers, service stations)
Municipal Utilities (water treatment, non-food garbage landfill, food garbage disposal)
Step 2 to an efficient Habitat Management

Development of Forecasts and Impact Assessment

- Identification of risks from animals for Aviation
- Modelling of forecasts for the appearance of dangerous species

Step 3 to an efficient Habitat Management

Development Mgmt. Plan

Designing measures helping to keep unwanted species away from aviation areas:

- Nomination of a responsible for habitat mgmt.
- Partitioning of aviation area against unwanted animals
- Making aviation areas and surroundings unattractive habitats
- Repelling, catching or killing unwanted animals
Main problem in Europe ...

... Bird strike!
Serious problem especially in spring and fall when bird migration occurs...
But peak: young birds during June, July!

Frankfurt Airport (I)

Policy: Taking preventive action to create unattractive living conditions for unwanted species in order to prevent their appearance on the airport and its surroundings.

Preventive Actions:
- Regular monitoring of mammals and birds according to standardized procedures
- Training of responsible staff (monitoring aviation areas)
- Avoiding ponds and marshes in the airport surroundings
- Avoiding plants being food sources or shelter
- Avoiding open waste or waste dumps in airport surroundings
- Development of grass cutting plans
- Hunting of mice (food source for predator birds)
- Partitioning of the aviation area with solid fences to prevent the appearance of mammals
- Use of nets to prevent the infiltration of birds
- Ban seat posts for birds in the aviation areas
- Use of preventive acoustic, visual, chemical, biological devices as well as electromagnetic radiation to prevent the infiltration of birds
Frankfurt Airport (II)

Corrective Actions:

- Hunting of mammals (foxes, rabbits, deer, boars) on the airfields
- Use of traps to catch unwanted species
- Use of guns for bird deterrence in emergencies
- Intensive pest control
- Landscaping with specific unattractive plants for birds

Natural Habitats…
Waste Deposit

Catching Animals
Repelling Birds from the Runway

Landscape
Examples for Active Protection

Examples for Passive Protection
Thank you for your attention.

Questions?