

RISK ANALYSIS OF BIRDSTRIKES ON VIENNA AIRPORT

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ABSTRACT

On recommendation of the Austrian Federal Ministry of Public Economy and Transport the "Flughafen Wien Betriebsgesellschaft m.b.H." (Vienna International Airport Authority) decided to start a program to reduce the risk of birdstrikes. One major step was an investigation of the quantity and distribution of birds on the area of and around Vienna Airport. The investigation period was one year.

As a result of this analysis four major items are in process to be improved to reduce the hazard of birdstrikes within the area around Vienna Airport. Another counter measure which is tested is the introduction of falconers.

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The birdstrike-rate on Vienna International Airport (VIE) is in the international average. Until 1989 fire crackers of various intensity and effect have been the only counter measures against birdstrikes. Therefore the Federal Ministry of Public Economy and Transport, Department of Civil Aviation (MOT) forced the "Flughafen Wien Betriebsges.m.b.H." (FWB), who is operator of the Vienna International Airport, to start a program for avoidance of birdstrikes. In early 1989 a department of safety and security was founded in the course of a reorganization of the FWB.

After several meetings an agreement was made to establish an extensive anti-bird strike program.

Members of the airport staff visited in September 1989 Manchester Airport, where Dr. Thomas Callum has set up a successful program to reduce birdstrikes, to obtain first information how to tackle a problem like this.

As a result of this trip the VIE security-people introduced the use of "stress call tapes" and bird mock-ups, which are thrown in the air, to frighten birds as a first measure.

For an effective reduction of birdstrikes the counter measures have to be adapted to the special conditions and circumstances on Vienna Airport. To obtain the necessary statistical data an analysis was initiated. In April 1990 the ornithologist Dr. Maria Elisabeth Wolf was contracted to provide a study about the risk of birdstrikes on Vienna Airport.

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Within an observation-period of one year Mrs. Wolf made more than 100 times a preselected tour through the area of and around Vienna Airport. Records of all observations were put into specially designed forms. The aim of this analysis was to record the quantity and distribution of birds split up in different bird species, areas, seasons etc. in comparison with the bird strikes which occurred. Also movements and habits of the different bird species have been observed.

The information and statistical data of this investigation was summarized in a report showing also some graphic representations of the analyzed subject. Resulting from the collected data there are four main items which have to be improved. The following paragraphs will indicate a short description of those items and the corresponding actions taken.

1) Garbage Dump

In the vicinity of Vienna International Airport a garbage dump is located. A strongly increased birdstrike-rate and a very high bird population was always observed within this area.

The FWB contacted the operator of this garbage dump. Together they set up quick first counter measures e.g. gas cannons. Also a shooting of birds in some cases is taken into consideration.

In 1993 a new law concerning waste utilization is planned to be put in force. This law will specify, that organic material (attractive for birds) has to be separated from other material. For the utilization of the organic waste (production of compost) a new building should be used. This building is secured against birds by means of nets where applicable. This would be a remarkable improvement of the present situation.

2) Birds' Nests

The airport operator is trying not to affect the natural environment more than necessary. Therefore a lot of trees and bushes which serve as breeding place for several bird-species can be found in many parts of the airport area. During winter 1991/92 approximately 100 birds' nests have been removed. This action should grant, that the bird-population on the area of the airport and its vicinity will be reduced.

3) Termination of agricultural utilization:

Presently 165 hectares of land, which form approximately 16 % of the total area, are used for agricultural utilization within the area of Vienna Airport. These places have (especially when sowing or harvesting is in progress) a high attractivity for various bird species. The airport operator has therefore developed a schedule to reduce stepwise the agricultural areas. As a first measure the leasing contracts with the tenant farmers of those fields, where the highest birdstrike rates have been observed, were terminated. These fields will be cultivated with long grass. In the future it is planned to cultivate all of the agricultural utilized areas with long grass.

4) Long Grass

The adoption of the long-grass-methode has already been started during the observation-period of Mrs. Wolf. This happened in close co-operation with the "Department of Ecology and Municipal Service" of Vienna Airport. The adoption is done step by step and is still in progress.

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Additional to those above mentioned counter measures against birdstrikes the FWB has made experiments to frighten birds away by means of falconery. The airport operator made these tests due to an offer of a falconer, who made his falcons available to frighten birds.

Until now it was not possible to give a reliable statement concerning the effectivity of this method.

Summary

All the above mentioned actions and measures show that many efforts have been undertaken to improve the present situation. As a result of the various activities the reduction of birdstrikes in future is expected.

In case of any questions or need for further detailed information of the actions taken in Austria don't hesitate to contact the Austrian representative under following address:

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