

BIRD STRIKE COMMITTEE EUROPE

BSCE 23/WP 20

London, 13 - 17 May 1996

## ICAO'S EFFORTS TO MINIMIZE BIRD STRIKES TO AIRCRAFT

Presented by Alistair Pinos  
Aerodromes, Air Routes, Ground Aids Section  
International Civil Aviation Organization  
Montreal, Quebec  
Canada

### Summary

This paper gives an overview of ICAO's continuing efforts to reduce the hazard which birds pose to civil aviation. Outlined are ICAO's attempts to increase awareness of the birdstrike threat through ICAO Annex 14, Volume I; *The Airport Services Manual, Part 3 - Bird Control and Reduction*; the ICAO Bird strike Information System (IBIS) and ICAO's Regional Bird Hazard Workshops.

Key Words: Regulations, Control Methods, Reporting, Bibliographic

## 1. Introduction

1.1 ICAO has long been concerned with the problems birds pose to aviation. In 1969, the Council of ICAO adopted Amendment 23 to Annex 14 which added a requirement to decrease the number of birds at aerodromes. Since that time, the Organization has developed the ICAO *Airport Services Manual, Part 3 - Bird Control and Reduction* and introduced the ICAO Bird Strike Information System (IBIS). The Organization has also attempted to bring the importance of bird hazard reduction at airports to the attention of States through the holding of workshops at ICAO Regional Offices.

## 2. Annex 14, Volume I

2.1 The Annex 14 provision to decrease the number of birds at aerodromes, introduced through Amendment 23, was general in nature and contained no detailed requirements for reducing birds at aerodromes. This lack of detailed requirements was brought to the attention of the Bird Strike Committee Europe (BSCE) with a request to assist ICAO by identifying measures which could be recommended for global application. As a result of activities within BSCE, a number of European States jointly forwarded to ICAO, proposals for amendment of Annex 14, Volume I, as well as Annex 15, which were adopted by ICAO in March 1990.

2.2 Annex 14, Volume I, paragraphs 9.5.1 through 9.5.3, as adopted in March 1990, contain recommendations that authorities should assess the bird hazard on or in the vicinity of an airport, take necessary action to decrease the number of birds by adopting measures for discouraging their presence and eliminate or prevent the establishment of any site which would be an attraction to birds. Specifications on measures to be taken to reduce the number of birds, which could be applied on a world-wide basis, have not been developed as such measures are considered to be dependent on the local situation and not suitable for application internationally.

## 3. Manual on Bird Control and Reduction

3.1 The first edition of the *Airport Services Manual, Part 3 - Bird Control and Reduction* was published in 1975 and was based primarily on experience gained in North America. It was replaced by a second edition in 1978 which broadened its scope to take into account other experience and particularly that in Europe.

3.2 A third edition of the manual was published in 1991. The prime purpose of this latest edition is to provide airport personnel with the information necessary to develop and implement an effective bird control programme for their airport. The manual stresses the importance of good organization and planning in the creation of a successful bird control programme. It is not intended to be a report on dispersal techniques. However, the manual does deal with the reasons why birds occur at an airport and briefly outlines some modifications which may be made to the airport to reduce its attractiveness to birds. Also, the *Airport Planning Manual, Part 2 - Land Use and Environmental Control*, highlights the importance of considering the bird hazard problem when selecting a new airport site.

## 4. ICAO Bird Strike Information System

4.1 With the proliferation of jet aircraft and the attendant increases in traffic which occurred throughout the 1950s and 1960s, modern jet-powered transport aircraft, with their greater speed, were seen to be at greater risk when colliding with birds than piston-powered aircraft had been. It became

## 5. Workshops

5.1 According to the provisions of Annex 14, Volume 1, there is a need for States to assess the hazard posed by birds and to adopt measures to discourage their presence on or in the vicinity of airports. ICAO conducts regional bird hazard workshops to promote and facilitate States' compliance with the Recommended Practices related to bird hazard reduction and to foster States' awareness of the problems birds pose to aviation.

5.2 ICAO's bird hazard workshops provide a forum for the exchange of ideas and information relating to bird hazard control among States, in a regional context. To date, ICAO has conducted eight bird hazard workshops, with one more planned for Nairobi, Kenya in September of this year.

5.3 The expertise brought to these ICAO regional workshops by the participants is the key to their success and ICAO Member States benefit from this expertise through their participation at these workshops.

## 6. Bird impact tolerance of aeroplane windshields

6.1 The subject of windshield impact tolerance was raised by India during discussions at the Technical Commission of the Twenty-Ninth Session of the ICAO Assembly, held in Montreal from 21 September to 8 October 1992. Cited was a case in which a large bird sufficiently damaged the windshield area of an aeroplane to cause an electrical malfunction that led to the loss of power to both engines as well as the loss of vision of the pilot resulting from injuries due to flying glass. Various statistics were presented to support the view that present impact resistance standards are inadequate when birds with a mass greater than 4 pounds are involved. Through ICAO State letter AN 4/9.1-94/9 dated 1 March 1994, States were requested to provide any information they may have or research they may be conducting into windshield impact survivability. The information received from States revealed that the 4-pound impact criteria was considered to be sufficient.

## 7. Conclusion

7.1 To increase awareness of the danger bird strikes pose to aviation, ICAO continues to place emphasis on the subject through Annex 14, Volume 1, the *Airport Services Manual*, Part 3, *Bird Control and Reduction*, the collection of bird strike data and regional bird hazard workshops. As always, the success of ICAO's efforts related to bird hazard reduction will depend on the continuing support of ICAO's Member States.

- END -