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**Agenda Item 30: Other safety matters**

**EXPERIENCE OF CHINA'S STRENGTHENING ITS MANAGEMENT OF WILDLIFE AT AIRPORTS**

(Presented by China)

**EXECUTIVE SUMMARY**

This paper mainly introduces that in order to alleviate hazard of the strike of the wildlife to airports, China civil aviation strengthens the management and study of the hazard of the strike of the wildlife to airports, with its adoption of a series of measures. As a result, its capability to ensure aviation safety has been improved effectively.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective A : Safety – <i>Enhance global civil aviation safety</i>
<i>Financial implications:</i>	Not applicable
<i>References:</i>	Annex 14 — <i>Aerodromes</i> Volume I — <i>Aerodrome Design and Operations</i>

<sup>1</sup> Chinese and English versions provided by China.

## 1. INTRODUCTION

1.1 With the rapid development of its economy, China's air transport increases substantially, wildlife aircraft strike has posed an increasingly severe challenge to flight safety. In recent years, Chinese government has adopted a series of measures to intensify its efforts in the management of and study on the prevention of wildlife aircraft strike at airports, so as to alleviate the hazard of the strike.

## 2. EXISTING MEASURES FOR MANAGEMENT OF WILDLIFE AT CHINA'S AIRPORTS

2.1 In order to accumulate and analyze bird information at airports, the competent authorities established the information system for the management of wildlife of China civil aviation, which is composed of the following three subsystems.

### a) Instant Inquiry System for Airport Birds

This system collected the pictures of main species of birds in China, the morphological and biological features of various birds, time of their stay in a region, their active time, food habits, quantity, degree of hazard to aircraft and prevention measures. The system provides ten types of inquiry in terms of picture, contour, color, quantity, hazard, food habits, season, remains, contents and bats, which make it convenient for the management personnel to easily and quickly identify birds in the sky above their local airports, and will offer relatively detailed introduction to the identified birds and the suggestion of preventive measures.

### b) Airport Bird Information System

This system provides visualized information on topography, geomorphology and adjacent biological environment of civil airports and their bird information observation sub-areas, records information on patrolling time, meteorological conditions, bird information data, bird expelling measures and effects, monitors the bird information, bird prevention records, and activities of the main migrant birds which influence flight safety, of all sub-areas of China civil airports, and provides real time predictive bird information and preventive measures based on quantitative modelling of the threat of birds and predictive modelling of bird information.

### c) China Civil Aviation Information Net for the Prevention of Bird Aircraft Strike

As a State level database of bird information and of bird strike, the core function of the network is to report, count up and analyze incidents of bird strike. The information net, taking the advantage of Internet, extensively collects, counts up and analyzes the information on incidents of bird strike, which fully reflects the characteristics of a non-punitive and voluntary reporting system. It provides timely and accurate information to CAAC, all regional administrations, airports and airlines.

## 2.2 Wildlife

### The Compilation of Technical Data of China Civil Aviation on the Management of

#### a) Guidance Manual for Management of Wildlife of China Civil Aviation

The manual has provided guiding suggestions, methods and measures on the management of wildlife for airports, airlines, air traffic management departments and local governments, and made clear their respective responsibilities. It has systematically summarized and evaluated various wildlife management technologies and measures, identified suitable methods to conduct ecological survey of airports and their adjacent areas, and in addition, summarized China's dangerous birds, their life habits, distribution and preventive measures.

#### b) Manual on Evaluation of Technologies and Facilities for the Management of Wildlife at Airports

The manual has established a set of evaluation systems, which can be used to evaluate technologies and facilities for the management of the main wildlife at airports, provide qualitative and quantitative evaluation results, identify advantages and disadvantages of these technologies and facilities, and put forward suggestions accordingly.

#### c) Manual on Evaluation of the Management of Wildlife at Airport

This manual has established an evaluation system including the organization structure, rules and regulations and personnel for the management of wildlife at airports, environment control, ecological surveys and bird and mammal control. Through evaluation of the management of wildlife at airports, pertinent suggestions for the management of wildlife at airports can be put forward.

#### d) Training Materials for the Management of Wildlife at Airports

Training materials for the management of wildlife at airports are directed to the frontline personnel responsible for the management of wildlife at airports. They cover major knowledge necessary for the management of wildlife at airports, and will lay the foundation for strengthening the training of personnel for the management of wildlife at airports, improving their work level and promoting the licensing of these personnel in this regard.

## 2.3 The Accumulation and Sharing of the Experience in the Management of Wildlife

2.3.1 In order to bring the attention of airports to knowledge accumulation, manage wildlife at airports in a scientific manner, reinforce the research on the management of wildlife at airports, and collect, sort and share the experience of civil aviation in the management of wildlife, the Department of Airports of CAAC organized the activity of "Soliciting papers on the Management of Wildlife". The subjects include work experience in the prevention of airport bird strike, effective measures for the prevention of birds at airports, relevant technologies of eradication of insects and rats and grass-cutting on airports, the techniques on the use of bird expelling facilities, ecological environment survey of bird information and effective preventive methods and measures, and introduction of experience of other

countries with developed civil aviation in the management of wildlife at airports. The content of the papers received covers various aspects of the management of wildlife in civil aviation, including national legislation on the management of wildlife hazards, improvement of internal rules and regulations of civil aviation, the experience in the ecological control of airports and effective measures for prevention of specific types of dangerous birds.

2.3.2 Bird strike incidents in China civil aviation have been collected and analyzed, so as to find the rules on the occurrence of bird strike in China civil air transport, work out effective measures and issue them to all civil airports.

2.3.3 Seminars on the management of wildlife have been organized and personnel responsible for the management of wildlife and airport inspectors of all civil airports have been trained.

### **3. FOLLOW-UP MEASURES FOR STRENGTHENING THE MANAGEMENT OF WILDLIFE AT AIRPORTS**

3.1 Considering its long time nature of the management of wildlife at airports, China civil aviation will make more efforts in this regard to improve the safety level of air transport. Through the above series of measures, the risk of wildlife aircraft strike has been effectively reduced.

3.2 The improvement of legal and regulation system. Legislation will be enacted to make clear the responsibilities and obligations of the airport authorities, aircraft operators, air traffic management departments, air safety management departments and relevant departments of the governments at all levels and specify the operational mechanism for the prevention of bird strike. Relevant rules and regulations of civil aviation will be revised and improved, and relevant regulatory documents and management procedures formulated.

3.3 The conduction of evaluation of the management of wildlife. Regular evaluation of the management of wildlife will be conducted, so as to identify defects and deficiencies in the prevention of wildlife strike and effectively improve the safety level of the system for the management of wildlife.

3.4 The training of the personnel responsible for the management of wildlife at airports. The training of the personnel responsible for the management of wildlife at airports will be organized and institutionalized.

3.5 The development of bird activity detecting facilities will be entrusted to research institutes, so as to help do a good job in the prevention of wildlife especially night birds and migrant birds.

3.6 The improvement and upgrading of the information system of wildlife management additional inquiry functions of the bird identification system will be incorporated, the functions of real time collection, statistical analysis and report generation of the airport ecological environment information, bird information and bird strike incidents will be strengthened and the analyzing models of migration information of migrant birds will be established.

3.7 The establishment of bird identification lab to conduct the work of bird identification. A China civil aviation lab for bird feather and DNA identification and a basic database of bird feather and DNA will be established, so as to conduct the work of bird identification, identify and count up the bird

species which threaten flight safety and have caused incidents of bird strike, and take pertinent preventive measures.

3.8 Reinforcement of exchanges both internally and internationally. A regular exchange mechanism on the management of wildlife will be established. National and regional seminars on the management of wildlife at airports will continue to be held and international cooperation and exchange will be promoted at the same time.

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