



ICAO

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Agenda Item 3: Global, Regional and National Guidance/Best Practices on Wildlife Hazard Management

WILDLIFE HAZARD MANAGEMENT CHALLENGES AND BEST PRACTICES ADOPTED TO CURTAIL WILDLIFE HAZARD AT CSMIA

(Presented by India)

SUMMARY

This paper presents the experience on grass policy adopted by Chhatrapati Shivaji Maharaj International Airport, Mumbai (CSMIA) to control the birds and other wildlife hazards which are posing threats to aircraft operating from CSMIA, India. Bird strikes in and around CSMIA are a common phenomenon and its continued increase has put the airport operators to look for effective mitigation measures and undertaken to reduce this hazards in order to provide a safe and efficient flying environment at CSMIA.

1. INTRODUCTION

1.1 CSMIA is managed by Mumbai International Airport Limited (MIAL), which has a dedicated Wildlife Hazard Management (WHM) team to monitor and restricting wildlife/bird activity, adopting both active and passive wildlife management methods and techniques to deter birds from visiting the airport complex. One of the passive method is habitat management, for example vegetation (Grass Management).

1.2 MIAL's Wildlife Hazard Department conducted studies on habitat management which have shown potential for reduction of wildlife. Implementation of the study has let to reduce number of bird strikes. Wildlife attractants at airport are food, shelter, water, and loafing areas. The height of grass in airfield is optimally managed during rainy season (long grass policy) and dry seasons (short grass policy). The purpose is to reduce the attractiveness of pigeons, egrets, heron and predators.

1.3 Grass height management is an important tool and one of the most effective as a wildlife hazard prevention strategy on airports. Different grass heights, mowing regimes, and grass species composition can attract varied groups of species representing different levels of risk for this kind of environment.

1.4 Different airports have developed specific recommendations for the height at which grass should be maintained on airports. The guiding principal is: short grass provides foraging areas for birds such as pigeons, crows and long grass provides food and shelter for small mammals that attract raptors and other predators. A long grass height is typically to minimize attraction of wildlife at different locations and seasons (specific appropriate grass heights depend on the preferences of the wildlife species of concern).

1.5 CSMIA has a grass policy, i.e. long grass and short grass. At CSMIA, Long grass policy envisages maintaining grass height of above 20 cm up to 30 cm and short grass policy a height of 20 cm or less.

1.5.1 As a policy based on experience, at CSMIA WHM will maintain long or short grass as per the table given below to control bird activity.

Area	Period	Grass policy
On the runway strip within 90m from the center line of runway.	June - November	Long grass policy (up to 30cm)
	December – May	Short grass (up to 20cm)
Other areas at airside beyond 90m from center line of runway	January – December	Short grass (up to 20cm)

2. DISCUSSION

2.1 Advantages of long grass policy at CSMIA

- Deters predators from locating insects and rodents hidden in the grass.
- Discourages birds like pigeons, egrets, crows to venture towards long grass and seeds & food are not visible due to the height of grass.
- Reduces the probability of roosting by kites and crows
- Able to cover bald patches thereby reducing grit eating birds (pigeons)

2.2 At CSMIA, long grass policy is implemented within 90m from centerline of runway, and beyond that area short grass is maintained. The strategic action plan forms three layers that prevent the birds to avoid going into the zone 1.

- The long grass making it unattractive for the birds from coming within a distance of 90m from CL of runway.
- The bird chaser located at 110 m deterring the birds from entering the zone near the runway.
- The short grass in the distant zone attracts the birds to an area away from the runway.

2.3 It is however not possible to maintain long grass policy for the entire year, except for the period between June to September, owing to drying and seed formation of grass. However in order to maintain similar strategy the grass will be maintained longer as far as practicable in the zones that are nearer to the runways. Inability to maintain long grass however will reduce the deterrent effect of long grass near runway zones and therefore will be complemented by tactical methods of:

- Dynamic deployment of bird scares and distress call devices.
- Tactical patrolling along the emergency road with scarecrow mounted vehicles.
- Control of, insects, rodent, snakes, plants attracting birds, carcass etc. within the 90m.
- Removal of cut grass to avoid matted grass habitat to avoid attracting barn owls.



Long Grass (up to 30 cms)



Short Grass (up to 20 cms)

2.4 The grass policy will provide one of the better mitigation measure in habitat management for the airport operator. This paper aims to communicate the latest best practices in Wildlife Hazard Management at CSMI Airport to a wide audience, including aviation professionals, airline passengers and to all those with interest in sustainable innovative solutions in the aviation industry.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

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