

# Terrestrial Animals Management practices at Addis Ababa Bole International Airport

Presented to: ESAF & WACAF Regional Workshop on WHM  
(virtual, July 26-27/2022)

By: Fekadu Assefa (Senior Airports WHM inspector) ECAA.



# Acknowledgement

- I would like to express my special gratitude and thanks to ICAO(ESAF&WACAF) staffs for giving us such opportunity to share our country practices.
- I hope such platform will be encouraged and continued for the future since the area needs a great attention to maintain the safety of the aviation Industry.

# 1. Introduction

- **Wildlife** refers to undomesticated animal species, but has come to include all organisms that grow or live wild in an area without being introduced by humans.



# Continued....

## Why we concerned about wildlife as an aviation industry?

1. **Hull-loss and fatalities**(E.g. Thirty-four people died in the bird-strike related crash of this C-130H at Eindhoven AFB,Holland on July 15, 1996.)
2. **The direct costs** refer to those incurred in the repair or replacement of damaged parts.
3. **Indirect costs** can include e.g. Fuel used and dumped during precautionary and emergency landing procedures.
4. **Ancillary costs** Ancillary costs are incurred by the airport owner or operator, regulatory authorities, other airport users and emergency-response agencies that must deal with the results of bird or mammal strikes.

# Airports and wildlife

- As a population of wildlife in and around an airport increase, collisions between aircraft and wildlife have been acknowledged since the primary aircraft started flew over 100 years ago. Wildlife strikes still be a significant safety concern for aviation regulators, airlines and airports.
- Occasional high-profile incidents, like the crash of Flight 1549 into the Hudson in 2009, bring the problems to the eye of passengers and therefore the public, but for the most part this is a risk that is not fully appreciated, even within the industry itself. It is not just the high-profile incidents that make the headlines that are of concern.

- Thousands of minor incidents, most causing no damage to aircraft, result in precautionary turn backs, engine checks, delays, cancellations and minor repairs that add up to at least \$1.2 billion per year in operational costs to the world civil aircraft fleet.

<http://wildlife.faa.gov>.

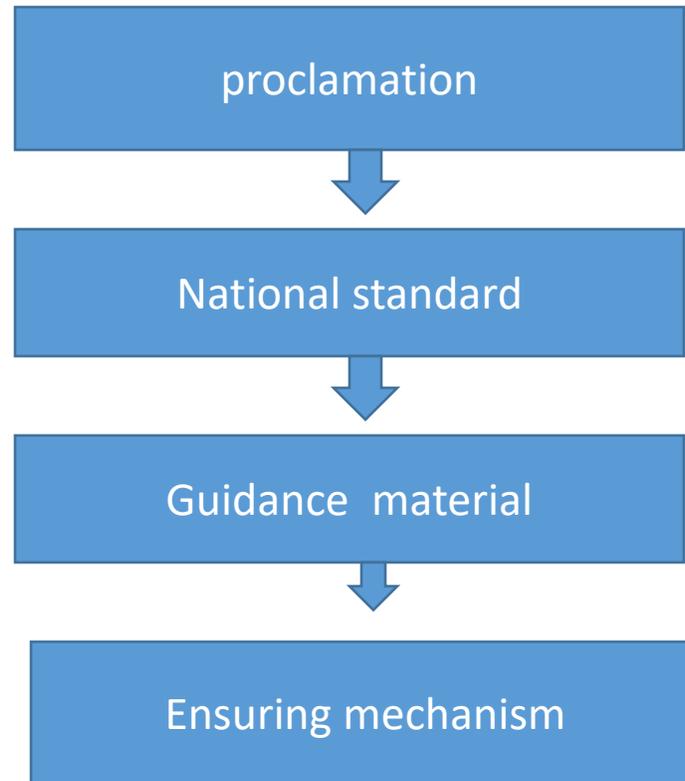
## 2. Wildlife (Terrestrial Animals) Hazard Management Experience In Ethiopia(HAAB)

- **Addis Ababa Bole International Airport** ([IATA: ADD](#), [ICAO: HAAB](#)) is an [international airport](#) in [Addis Ababa](#), [Ethiopia](#).
- It is the main [hub](#) of [Ethiopian Airlines](#)
- The airport is also the base of the Ethiopian Aviation Academy. As of June 2018, nearly 450 flights per day were departing from and arriving at the airport.

## There are different actors in AWHM

1. Ethiopian Civil aviation authority
2. Ethiopian aviation group
3. Aircraft operators
4. Local government agencies
5. Other private and NGOS (education institution or researchers, manufacturers Etc....)

# a, The Role of Ethiopian civil aviation



## b, Addis Ababa Bole International Airport Wildlife (Terrestrial Animal hazard management)

The *only* way to prevent wildlife strikes is through the careful application of a System Safety Approach—an approach that systematically and proactively involves all stakeholders.

**System safety is outcome-based:** to prevent an accident, the approach is used to identify all of the complex, interwoven events that can lead to an accident. Within the system, specific responsibilities are distributed among various stakeholders—responsibilities that are closely linked. As long as all stakeholders fulfill their roles, the system remains intact, and safety is ensured.

# The airport has :

1. **An Ecological assessment of the airport** . The objective of an Assessment is to provide a baseline of data and understanding of wildlife species considered hazardous on or near an airport and of attractants that provide food, water, and shelter.
- **Wildlife Hazard** Assessment is submitted by the airport to the ECAA for review and approval.

# Continued.....

- **Wildlife Hazard** Assessment is vital to determine if the airport must do a Wildlife Hazard Management Plan.
- The goal of an airport's wildlife hazard management Plan is to minimize the risk to aviation safety, airport structures or equipment, or human health posed by populations of hazardous wildlife on and around the airport.

# Continued.....

## **2. Wildlife hazard management plan.**

- Identification of hazardous wildlife and their attractants,
- Suitable proactive and reactive management techniques,
- Necessary resources and supplies to successfully implement a wildlife hazard management program and personnel responsibilities and training requirements.
- Appropriate federal and possible local wildlife control permits should be identified
- As well as a schedule and methodology to evaluate and update the Plan.

# The airport has two strategies for the management of terrestrial animals:

**1. Passive management:** The modification of habitat to render it less attractive to wildlife Habitat Management ( managing the source of food ,water, shelter & cover)

**2. Active management :**The use of short-term management techniques such as distress calls, pyrotechnics, trapping and culling to disperse or remove wildlife

# 1. Passive management:

The modification of habitat to render it less attractive to wildlife

Habitat Management ( managing the source of food ,water, shelter & cover)

- Water body management
- Vegetation/fauna management
- Airport appealing structure management

# A, Water body management at HAAB



# Water body management at HAAB



## B, Vegetation/fauna management



Such kinds of airport environment provides an attractant for different animals.



# Airport environment management at HAAB



C, Airport structure management at HAAB



Fence at HAAB



## 2.Active management :

The use of short-term management techniques such as distress calls, trapping and culling to disperse or remove wildlife

### A. Distress calls



Continued.....

## **B. Trapping at HAAB**



# Trapping at HAAB



Continued...

## **C. Culling**



Culling at HAAB



# 3.Challenges of WHM at HAAB

- ❖ Cost for habitat management
- ❖ Cost for active management
- ❖ Lack of training
- ❖ Diversified eco system ( species and habitat)

# 4. Opportunities for managing wildlife hazard at HAAB

- ❖ Ecological studies availability
- ❖ Reporting culture by aviation community (Pilots, ATCs, Airport personnel)
- ❖ Clearly stated regulatory requirements
- ❖ Availability of Industry guidance on WHM
- ❖ Aviation safety priority by the law in Ethiopia (Culling of different wildlife that jeopardize the safety of aircraft operation).

**Thank You!**

