





Improving management of wildlife hazards at airports in Zambia



OVERVIEW



- ✓ Airports in Zambia
- Legal requirements for Airport Wildlife Hazard Management in Zambia
- ✓ Challenges faced in implementing requirements over the years
- ✓ Progress made ;-
 - strike reporting and identification of species
 - Data collection and analysis
- ✓ Initiatives that drove the change
- ✓ 2021 Wildlife management Techniques
- ✓ Risk Assessment

International Airports in Zambia











ZCARs 14.9.4 Bird hazard reduction at aerodrome

- An operator shall, in consultation with the authority responsible for wildlife, take all reasonable steps to minimize the risks associated with bird strike hazards
- An operator shall take practical measures to control the bird habitat at or around the aerodrome and to disperse birds, which are a potential hazard to aircraft operations
- A bird strike hazard on, or in the vicinity of, an aerodrome shall be assessed through ;
- procedure established for recording and reporting bird strikes to aircraft; and

Legal requirements cont.....





- the collection of information from aircraft operators and aerodrome personnel, or any other person, on the presence of birds, on or around the aerodrome, which constitute a potential hazard to aircraft operations.
- Where a bird hazard is identified at an aerodrome, the operator shall take action to decrease the number of birds constituting the potential hazard to aircraft operations by adopting measures for discouraging their presence on, or in the vicinity of the aerodrome.

Challenges faced in implementing requirements over the years



- Lack of a proper system for reporting wildlife strike incidences
- Lack of a system for data capturing and analysis
- Lack of active deterrent equipment
- Lack of trained personnel in managing airport wildlife hazards
- Unidentified wildlife species
- Lack of documented WHM procedures
- Lack of control over land use in the vicinity of the airports

Progress- strike reporting and identification of species .





- A positive change was recorded in wildlife strike reporting and identification of struck species over years.
- On a monthly basis, strike incidences are submitted to the authority for onward forwarding to ICAO IBIS data base.



Strike trends

Progress- strike reporting and identification of species .





-				% of	
	Year	Total strike incidences	Unidentified species	unidentified species	
	2018	41	17	41%	
	2019	89	18	20%	
	2020	64	3	0.05%	

X



Data collection

Evidence/data driven based decision making is key for the success of any programme. The airports implemented the following to ensure availability of adequate data to drive decisions

- Daily assessment of wildlife activities and attractants within the airport
- Quarterly assessment of approach and take off paths outside airport premises
- Multiple reporting of wildlife strike incidences(reported and unreported)

Data collection and analysis





Data Analysis

- All collected data is subjected to analysis.
- Daily Assessment analysed for population of species, time distribution, attractants, seasonal patterns.
- Wildlife strike incidents- time of strike, phase of flight and effect on flight and respective airports # of strike incidences .
- Other elements of the strike form will be included for analysis
 progressively
- Monthly, quarterly and annual trends are analysed

Initiatives that drove the change.





- The improvement was due to:
- Investment in Training of Wildlife Operators and Coordinators
- Continuous awareness's
- Engagement with Wildlife Operators in planning stages of WHM
- Creating a buying in from both Management and Operators
- Identification and engagement of key players in managing wildlife hazards at airports.
- Provision of field guides





First time investment In equipment

- New equipment for the SMKIA (distress/predatory sounds, gas gun, Pneumatic eye, netting)
- New equipment will be procured in Q1 of 2021 for HMNIA (Hand held laser and distress calls)
- Hand held laser and other consumables to be procured in Q1

Enhanced habitat modification techniques

- Grass cutting will be conducted on experimental basis until the right height is arrived at
- Thatch will be collected off the airfield after cutting







Exclusion

 consultation is ongoing on how best to manage elephants at HMNIA which continuously damage the perimeter fence, both indigenous knowledge and scientific approaches are explored





- Assessment of risk is conducted on a seasonal basis considering patterns of wildlife presence around the aerodromes
- Risk assessment employs an alpha numeric methodology
- Risk is rated based on the likelihood of the strike incidence involving a particular specie and the extent of the probable damage.
- Risk rating =Probability X impact

Risk Assessment Matrix

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Possibility of damage which might be caused by species after collision with aircraft dependent on the weight in Kg							
	Low Risk		Extremely high				
h an	Moderate Risk		chances of	Verv high	High	Medium	Low
n wit	High Risk		damage	(2.5-3.0 kg)	(1.5-2.4kg)	(0.6-1.4kg)	(0.5 kg and
ollision	Extreme/ unacce	otable risk	(Above 3 kg)				below)
lin a	Frequency	Strikes per year	Α	В	С	D	E
lvec	Extreme						
invo aft	Frequency	5 (>10 strikes)					
eing aircr	High Frequency						
cies b		4 (7-10 strikes)					
spe	Frequent	3 (4-6 strikes)					
of a	Medium	2 (1-3 strikes)					
oility	Frequency						
obał	Low Frequency	1 (0 strikes)					
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