





ICAO Annex 14:

The presence of wildlife (birds and animals) on and in the aerodrome vicinity poses a serious threat to aircraft operational safety.

Action shall be taken to decrease the risk to aircraft operations by adopting measures to minimize the likelihood of collisions between wildlife and aircraft.



WHM Challenges

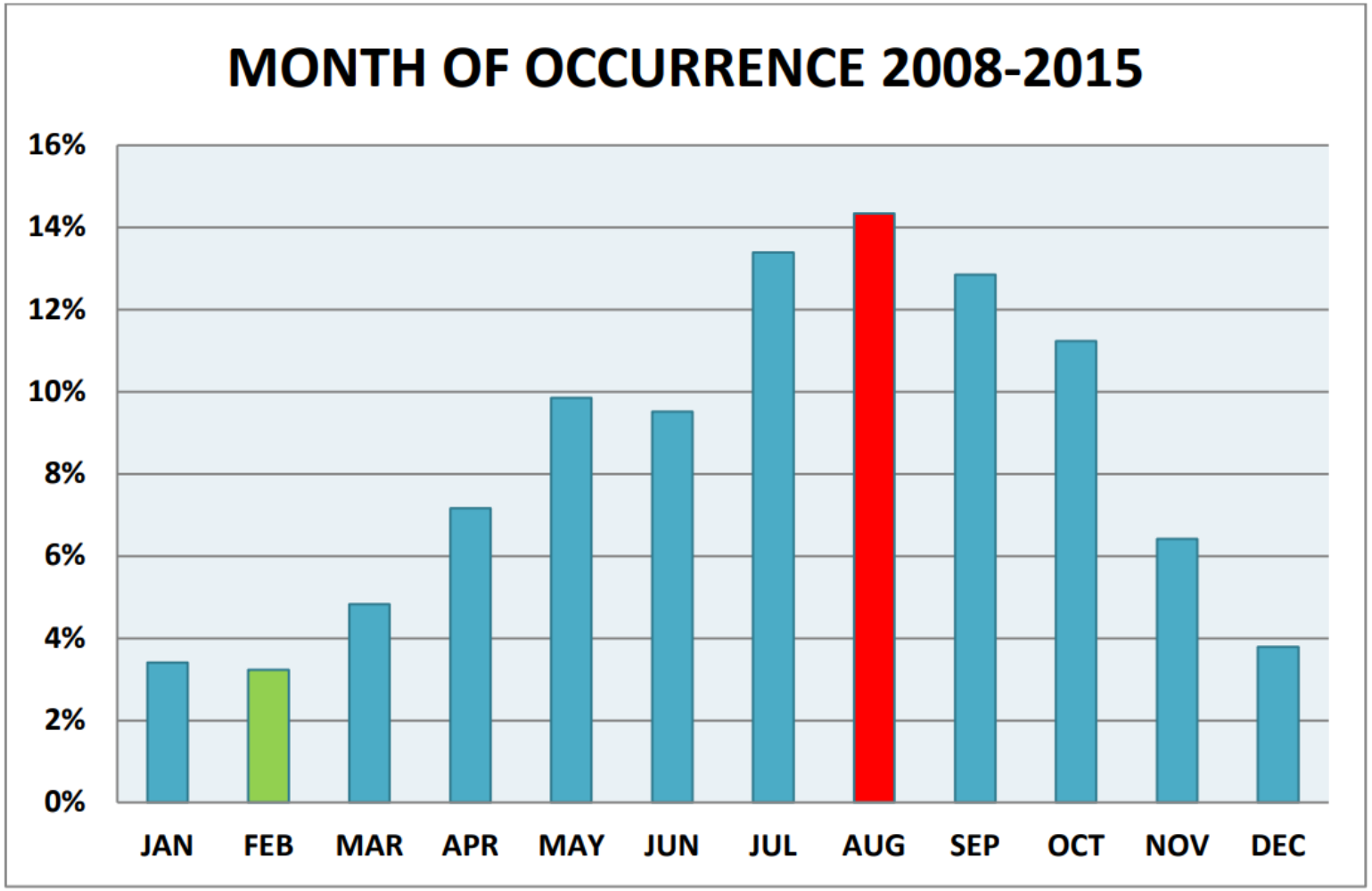
Albert de Hoon MSc

ICAO
WILDLIFE
WORKSHOP
TIVAT, 22 Sept 2026

Our WHM Challenges



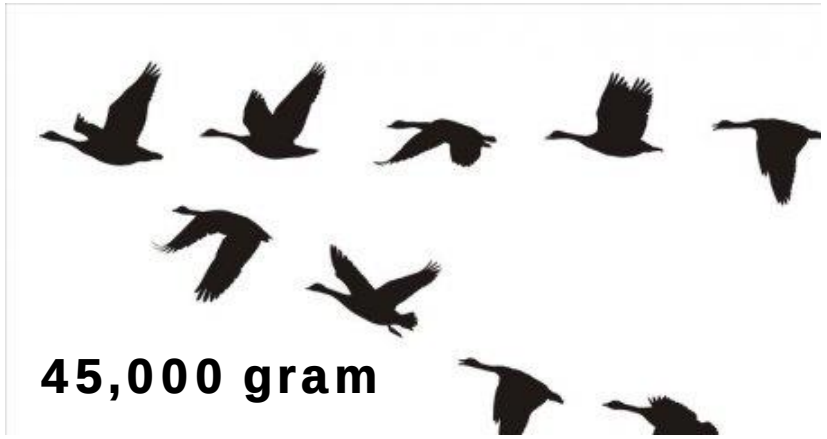
1. Reporting – definition – indicators
2. Risk assessment
3. Personnel – number / compentency
4. Ecological Carrying Capacity
5. Vegetation management
6. Harrassment techniques
7. Raptor control
8. Climate change
9. Nature conservation ~ flight safety
10. Neighbours



Do we want to differentiate between species?



20 gram



45,000 gram





Which indicators do we want?

# of wildlife strikes †

near misses

animals crossing the runway

 # animals at airport / in vicinity



1. Which risk assessment method?
2. Which probability criteria?
3. Which severity criteria?



20 gram



45.000 gram

		SEVERITY				
		NUISANCE	MINOR	MAJOR	HAZARDOUS	CATASTROPHIC
PROBABILITY	FREQUENT	5	10	15	20	25
	OCCASIONAL	4	8	12	16	20
	REMOTE	3	6	9	12	15
	IMPROBABLE	2	4	6	8	10
	EXT. IMPROBABLE	1	2	3	4	5

International Standards
and Recommended Practices

Annex 1
to the Convention on
International Civil Aviation

Personnel Licensing

CHAPTER 2. Licences and Ratings for Pilots.....

2.1 General rules concerning pilot licences and ratings.....
2.2 Student pilot.....
2.3 Private pilot licence .....
2.4 Commercial pilot licence.....
2.5 Multi-crew pilot licence appropriate to the aeroplane category.....
2.6 Airline transport pilot licence .....
2.7 Instrument rating.....
2.8 Flight instructor rating appropriate to aeroplanes, airships, helicopters and powered-lifts
2.9 Glider pilot licence .....
2.10 Free balloon pilot licence.....

CHAPTER 3. Licences for Flight Crew Members other than Licences for Pilots...

3.1 General rules concerning flight navigator and flight engineer licences .....
3.2 Flight navigator licence .....
3.3 Flight engineer licence.....
3.4 Flight radiotelephone operator.....

CHAPTER 4. Licences and Ratings for Personnel other than Flight Crew Membe

4.1 General rules concerning licences and ratings for personnel other than f
4.2 Aircraft maintenance (technician/engineer/mechanic) .....
4.3 Student air traffic controller.....
4.4 Air traffic controller licence .....
4.5 Air traffic controller ratings.....
4.6 Flight operations officer/flight dispatcher licence .....
4.7 Aeronautical station operator licence.....
4.8 Aeronautical meteorological personnel .....

9.4 Wildlife strike hazard reduction

Note.—The presence of wildlife (birds and animals) on and in the aerodrome vicinity poses a serious threat to aircraft operational safety.

9.4.1 The wildlife strike hazard on, or in the vicinity of, an aerodrome shall be assessed through:

a) the establishment of a national procedure for recording and reporting wildlife strikes to aircraft;

b) the collection of information from aircraft operators, aerodrome personnel and other sources on the presence of wildlife on or around the aerodrome constituting a potential hazard to aircraft operations; and

c) an ongoing evaluation of the wildlife hazard by competent personnel.



Appendix 1 to Chapter 6

WILDLIFE CONTROL TRAINING

1. INITIAL TRAINING

The initial training for wildlife control personnel should, as a minimum, address the following areas:

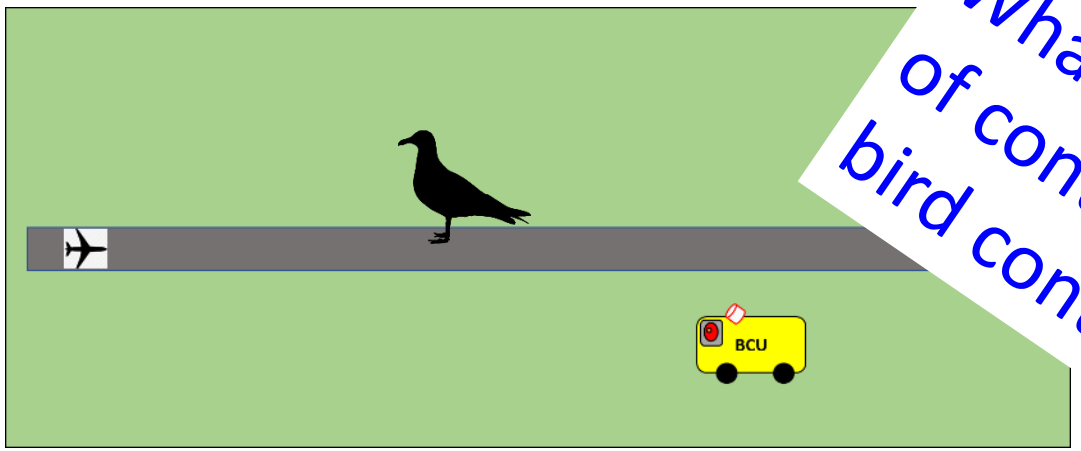
2. RECURRENT TRAINING

In order to maintain the competence of wildlife management personnel, recurrent training should be carried out, including a selection of general topics covered in the wildlife control initial training. This should include:

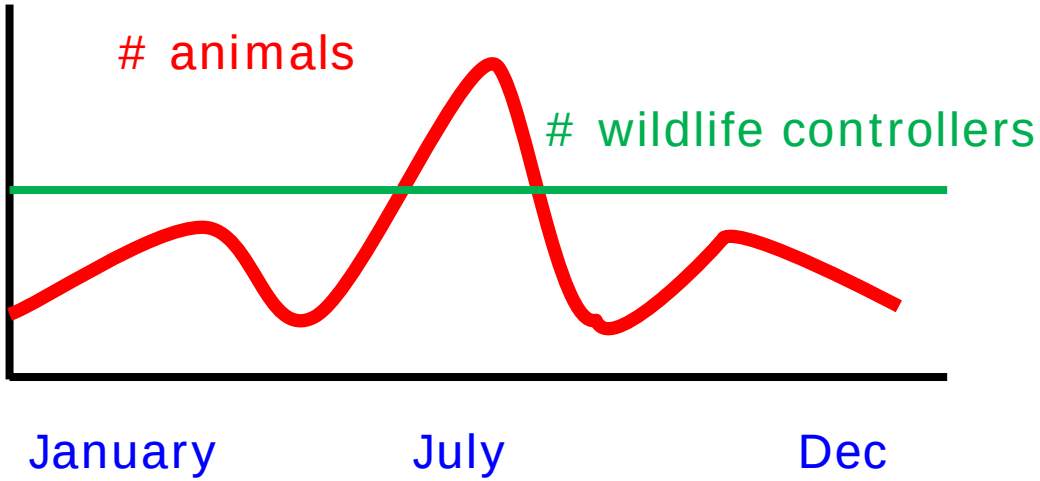
3. WILDLIFE CONTROL TRAINING SYLLABUS

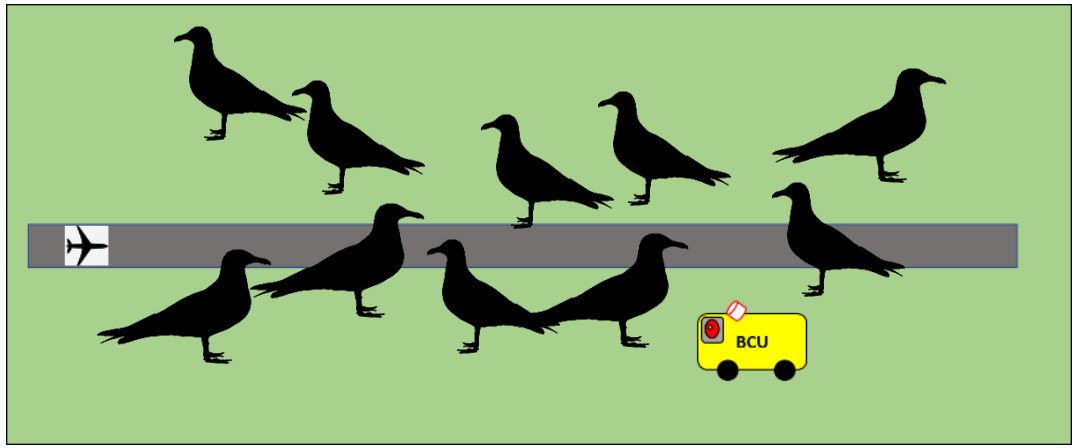
A typical training syllabus may contain the topics listed below:

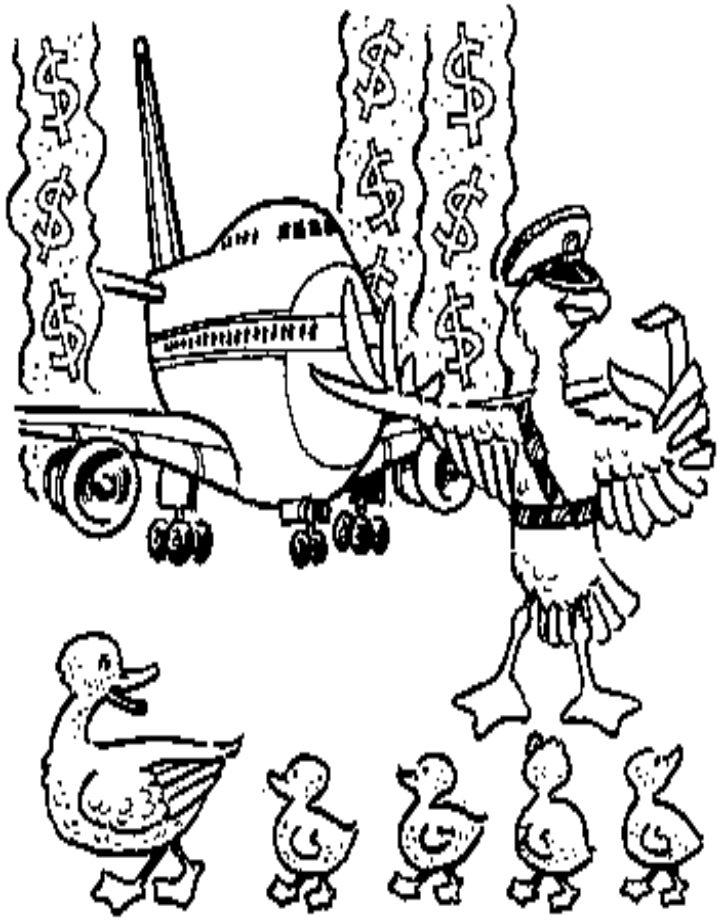




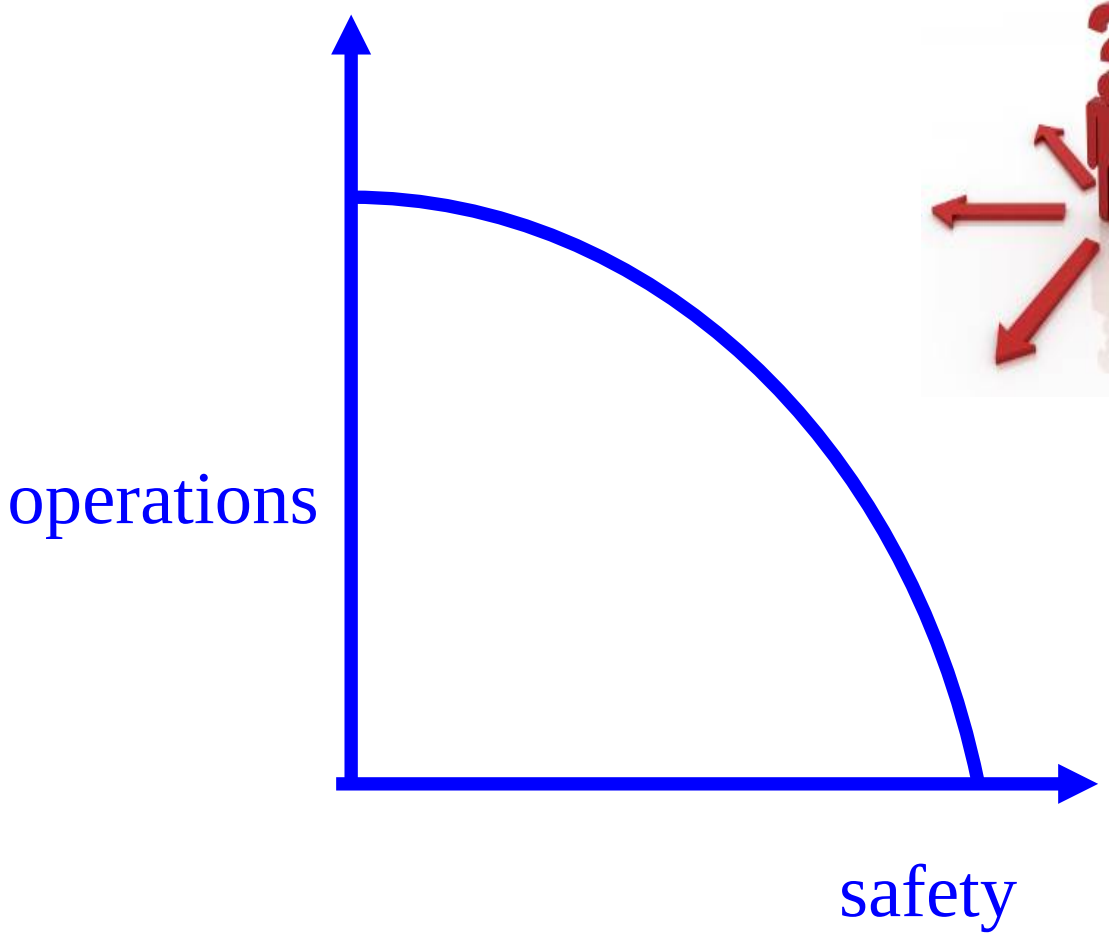
What is the span of control of 1 bird controller?







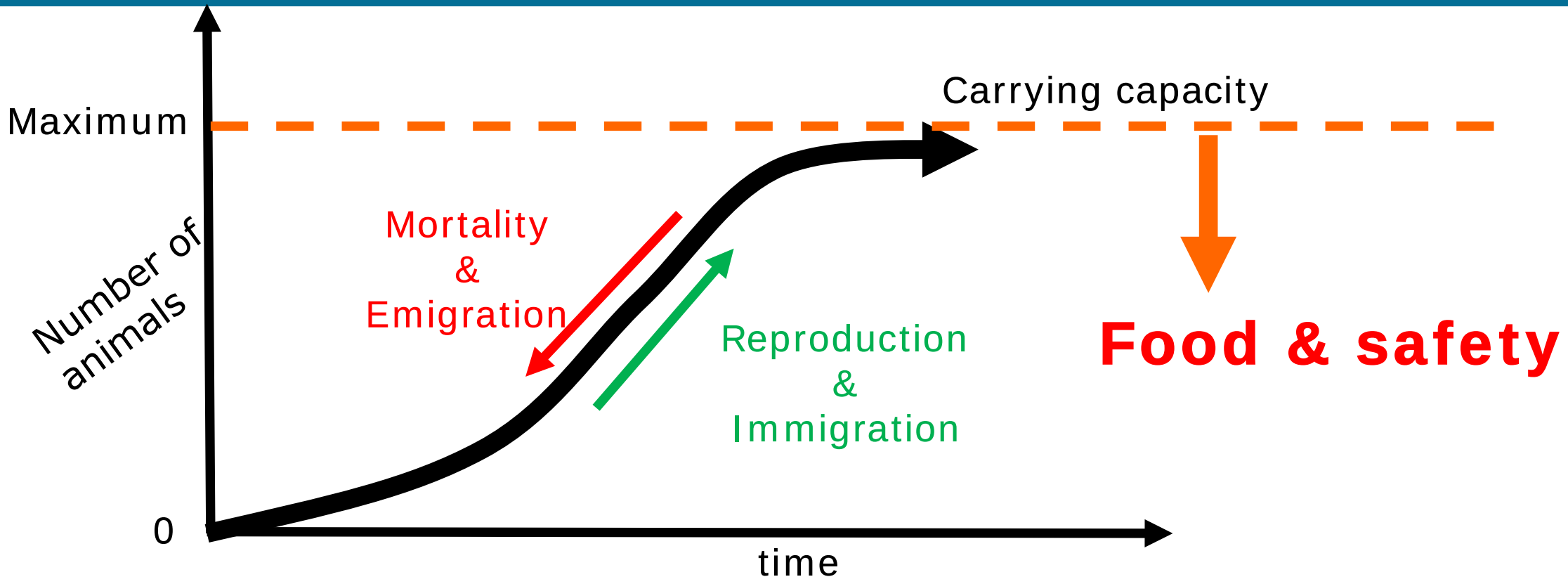



operations
safety



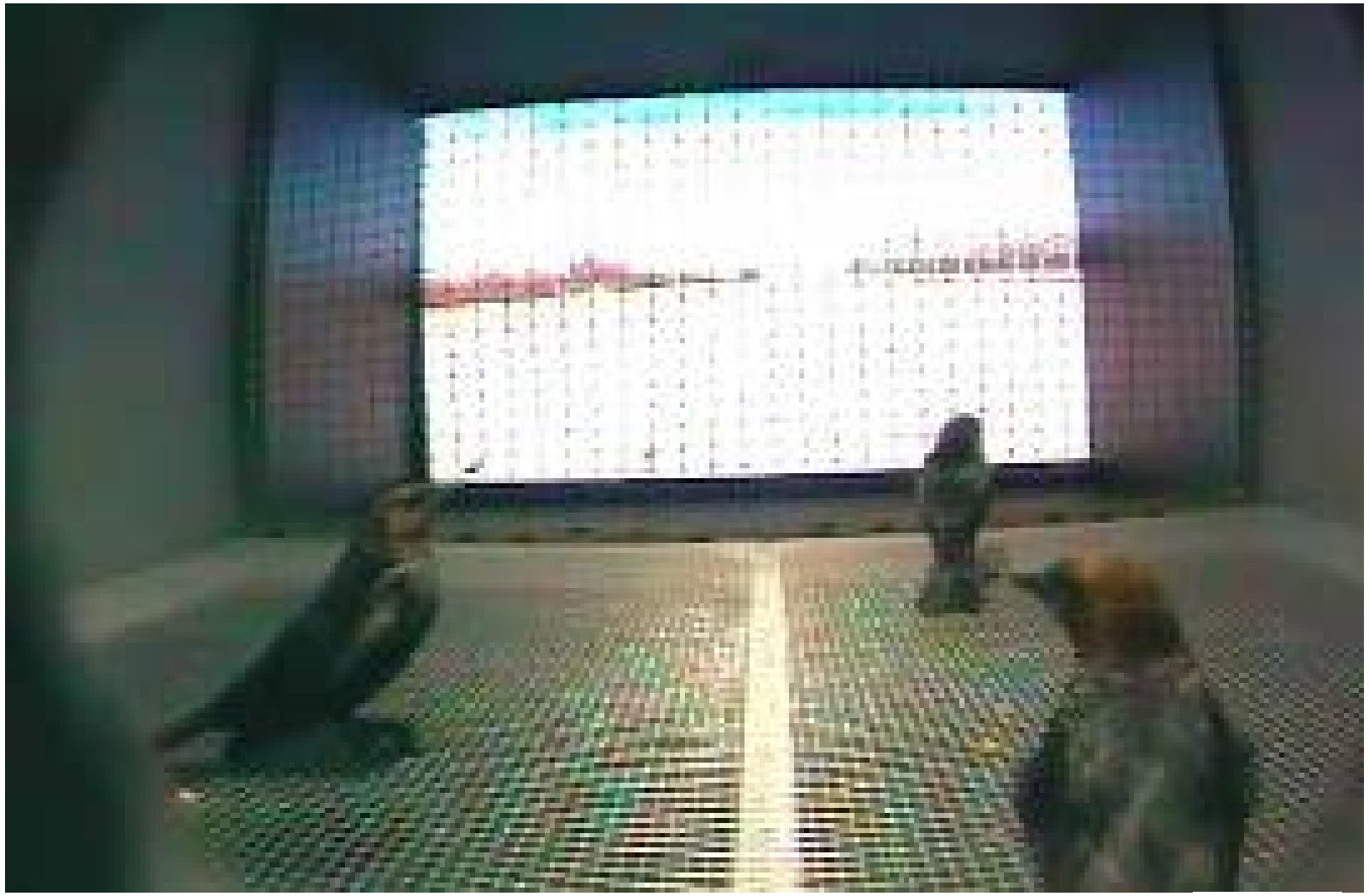

Cost
Risk
Benefit

Ecological Carrying Capacity



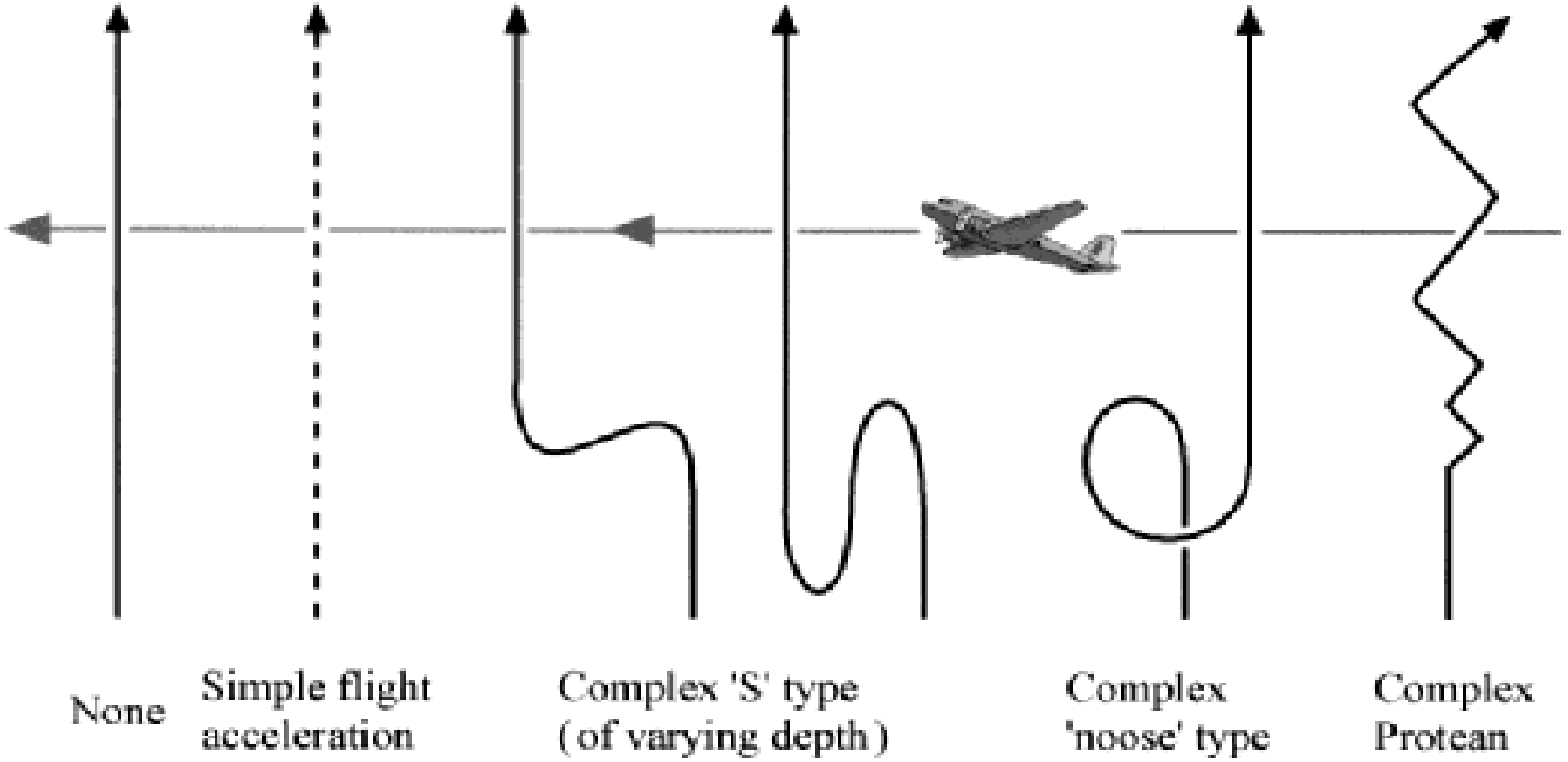
1. What is the ecological carrying capacity of your airport?
2. How can you reduce this ecological carrying capacity?

Ability to avoid aircraft



Study at the USDA, USA

Ability to avoid aircraft



Study Cork University, Ireland



Identifying wildlife during flight operations





Identifying wildlife during flight operations







Identifying wildlife during flight operations

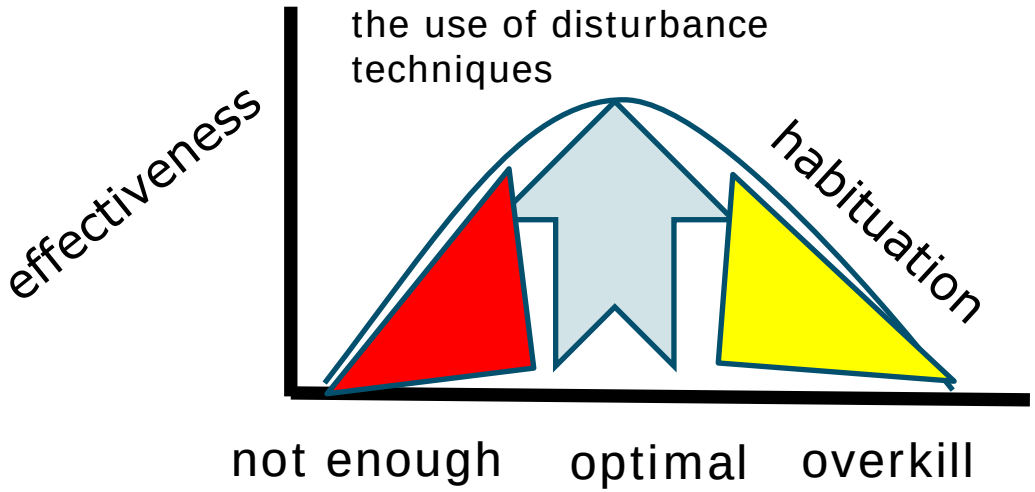


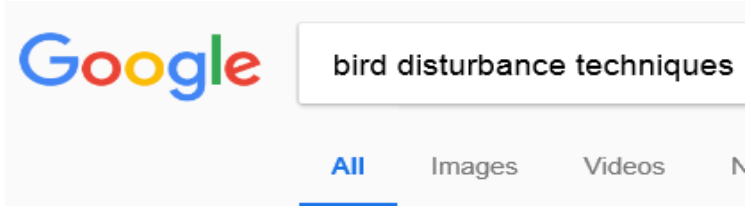






Harrassment techniques





22,700,000 results in 0.28 seconds

What is your silver bullet?



Climate change

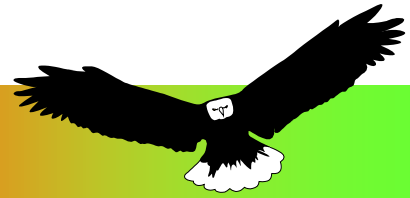


Nature conservation flight safety









Nature Agriculture ⟷ Flight Safety ⟷ Nature Agriculture



Neighbours

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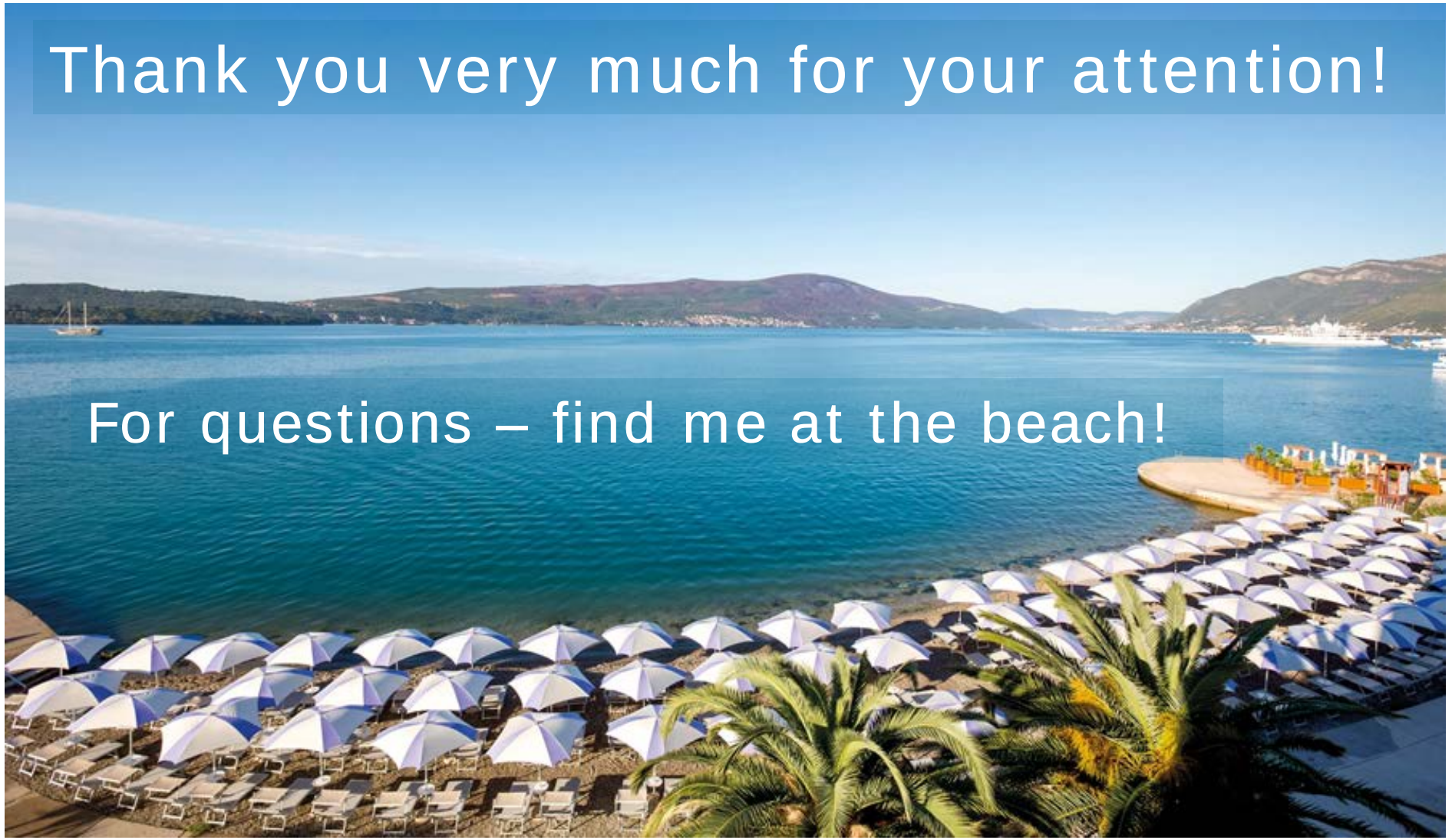
c) an ongoing evaluation of the wildlife hazard by competent personnel.

Neighbours



9.4.4 The appropriate authority shall take action to eliminate or to prevent the establishment of garbage disposal dumps or any other source which may attract wildlife to the aerodrome, or its vicinity, unless an appropriate wildlife assessment indicates that they are unlikely to create conditions conducive to a wildlife hazard problem. Where the elimination of existing sites is not possible, the appropriate authority shall ensure that any risk to aircraft posed by these sites is assessed and reduced to as low as reasonably practicable.

9.4.5 **Recommendation.—** *States should give due consideration to aviation safety concerns related to land developments in the vicinity of the aerodrome that may attract wildlife.*


Thank you very much for your attention!
For questions – find me at the beach!