



ICAO

MIDANPIRG/23 & RASG-MID/13

CAIRO - EGYPT

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Protecting Aviation Safety Effective Wildlife Management

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Map of (24) Airports of Arab Republic of Egypt



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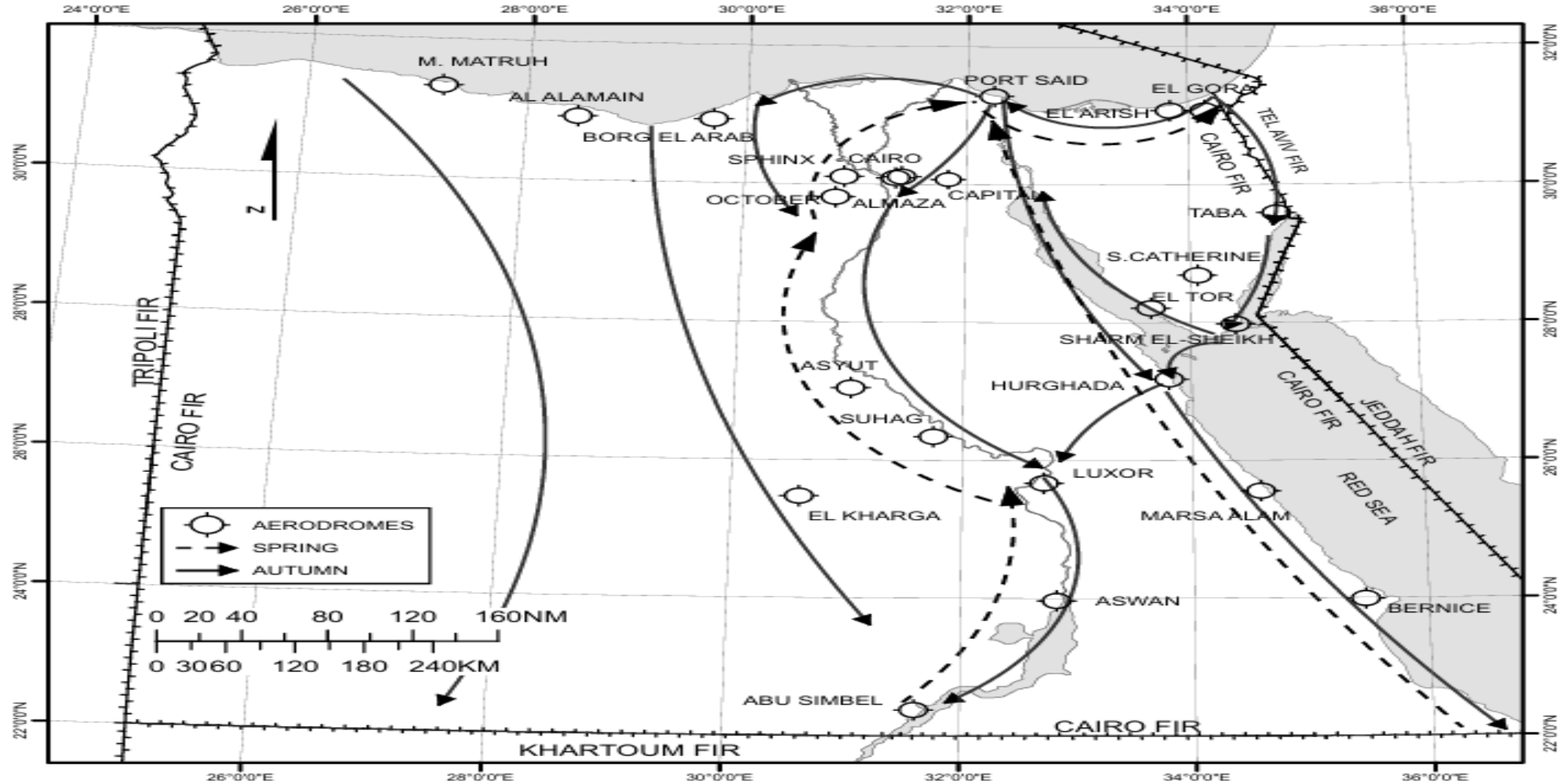


Introduction

General information
about bird migration

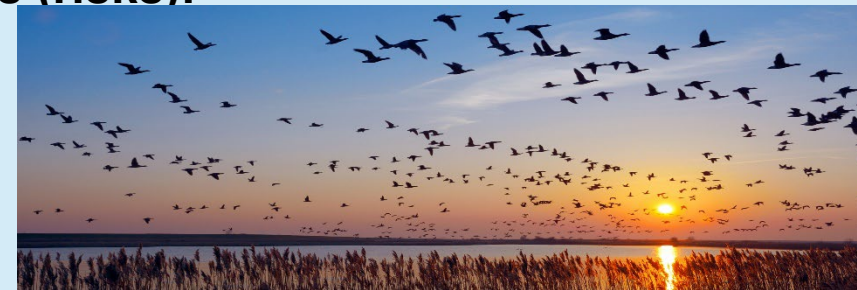


BIRD MIGRATION ROUTES



BIRD migration is considered one of the natural processes that pose the greatest threat to air navigation safety, as well as the safety of lives and property. This is due to several factors that lead to multiplying the severity of impacts (risks):

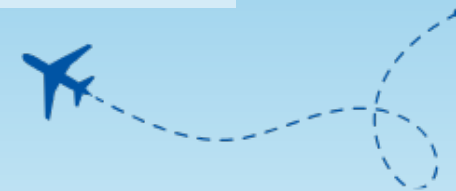
- 1- Bird migration within large flocks.
- 2- Variation in bird sizes.
- 3- Relatively high altitudes.



Comprehensive wildlife monitoring datasets compiled by ECAA Inspectors identify two high-risk seasonal windows:-

Autumn Migration (August – November): Large-scale influx of soaring birds (White Storks, Birds of Prey) utilizing thermal air currents near the coastline.

Spring Migration (March – May): Return movements of waterfowl and passerines seeking rest and hydration points along the Red Sea shorelines.



Important information to reduce the risks of bird strikes with aircraft:

Most birds fly at 500-3000 feet

Waterfowl fly at 1000-5000 feet

Pelicans / Geese fly at 7000 feet

In most gatherings around airports, bird altitudes generally do not exceed 3000 FT

Altitudes of bird incidents:-

60% of bird incidents occur at altitudes of less than 1000 feet

38% of bird incidents occur at altitudes of less than 2000 feet

1-2% of bird incidents occur at altitudes of more than 12000 feet

And these incidents non-exist at higher altitudes and their occurrence is rare."



02
The
Regulatory
Framework of
the Civil
Aviation
Organization



Aerodrome regulatory requirement according to :-

- ANNEX 14 VOL 1-
- ICAO DOC. 9137-9981
- ECAR 139.335,d
- EAC 139.20
- EAC139.16



03

Reasons for
the increase
in the rate of
bird and
wildlife
incidents at
Egyptian
Airports



Reasons for the increase in the rate of bird and wildlife incidents at Egyptian Airports



"The presence of **public landfills and sanitary landfills** near airports (**Hurghada** - Sharm El-Sheikh - Marsa Alam), as well as the presence of **residential gatherings** that produce waste and building rooftops with sources that attract birds (Cairo Airport - Alexandria)."



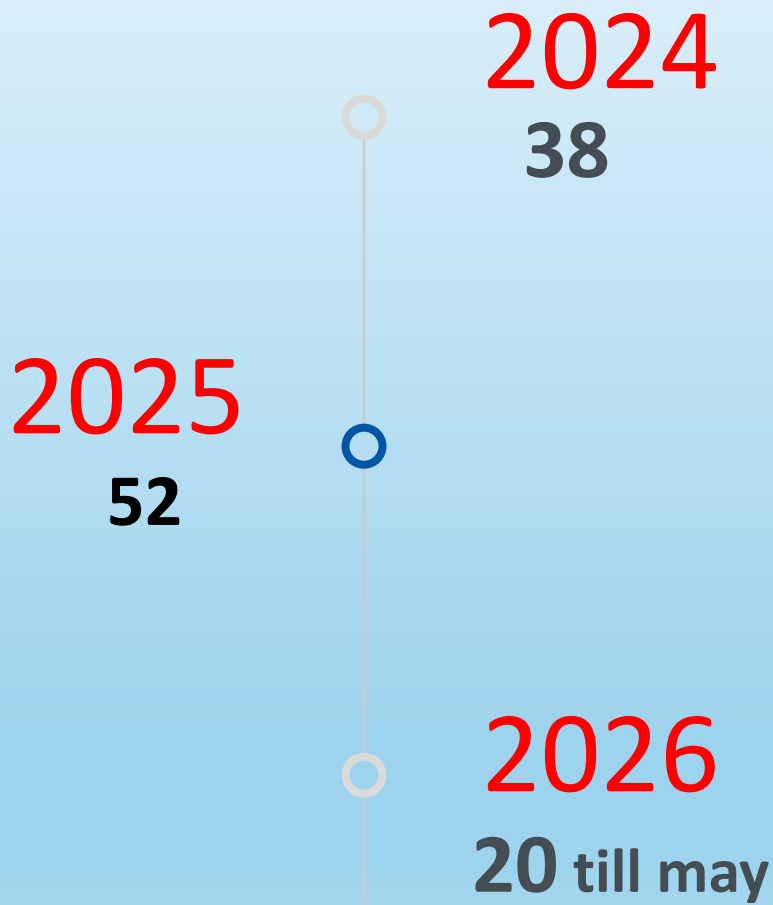
"The presence of **oxidation ponds near airports**, which attract migratory and resident birds, for example (Hurghada - **Sharm El-Sheikh** - Alexandria - Luxor - Assiut)."



"The presence of attractive and **fruitful crops**, allows for the attraction of birds, which affects the safety of air traffic (Sphinx - **Alexandria** - Luxor - El Alamein)."



NO. OF BIRD STRIKES Reported



CONFIRMED BIRD STRIKES 2026 Till now	CONFIRMED BIRD STRIKES 2025	AIRPORT
4	4	HURGHADA
1(WILDLIFE)	3	SPHINEX
0	4	SUHAGE
1	3	SHARM ELSHEIKH
3	3	CAIRO
0	0	ASWAN
1	7	ALEXANDRIA
1	1	LUXOR
1	2	ASSIUT
0	0	MARSA ALLAM

04
Measures taken by the Civil Aviation Authority to mitigate risks faced by airports



External attractants

2.4.1.2 A good working relationship with neighboring stakeholders is an essential first step in protecting the interests of an aerodrome and its clients. (EAC 139.20)



1- ECAA published on AIP **En-route 5.6 Bird Migration and Areas with Sensitive Fauna and En-route 6.7 & 6.8 charts** for bird migration routes and bird concentration areas to provide information about the bird concentration areas around the Egyptian airports to be taken into consideration by the pilot when fly over the Egyptian airports and take caution about it.**IT WAS PUBLISHED ON 7/2025**



2- The ECAA requested that no project attracting birds be built without civil aviation authority approval, to ensure air safety. This directive was issued and sent to ministries **on January 5, 2026.**



3-Co-ordination with Ministry of Housing (**Holding Company for Drinking Water and Sanitation**) to take into account that oxidation basins or shrub forests are not established near Egyptian airports until after referring to the Civil Aviation Authority to show the extent of its impact on the safety of air traffic, and the circular and implementation was made.

Internal attractants



Aerodrome Operator Auditing: The ECAA conducts quarterly inspections for evaluating Egyptian Airport's Wildlife Hazard Management Programme (WHMP), checking logs for active dispersal mechanisms (e.g., falconry, bio-acoustics) and grass-height compliance

Inspections conducted by ECAA 2025



- | | |
|--------------------------------------|-----------|
| 1-Marsa Alam Airport was inspected | Feb-2025 |
| 2-alaamin airport was inspected | Feb -2025 |
| 3-Sphinx airport was inspected | June-2025 |
| 4-hurghada airport was inspected | June-2025 |
| 5-Assiut airport was inspected | july-2025 |
| 6-alexandria airport was inspected | Aug -2025 |
| 7-Marsa matroh airport was inspected | Aug-2025 |
| 8-Sphinx airport was inspected | oct-2025 |
| 9-Luxor airport was inspected | Dec -2025 |



External attractants



4 - Co-ordination with the **Environmental Affairs Authority** for not giving approvals for environmental impact assessment studies for any activity that would attract birds around Egyptian airports until after referring to the Civil Aviation Authority and the implementation was done.



5-Meetings were attended with the **Ministry of Local Development** to coordinate and conduct campaigns to remove any causes of attracting birds and wildlife within airports (Cairo-Hurghada -Sharm El-Sheikh). Campaigns were carried out in stages for Cairo Airfield.

Internal attractants

Inspections conducted by ECAA in 2026



- | | |
|--|-------------|
| 1- Aswan Airport was inspected | Jan -2026 |
| 2- Suhag Airport was inspected | Mar-2026 |
| 3- Marsa matrouh Airport was inspected | April -2026 |
| 4- Capital Airport was inspected | April -2026 |
| 5- Cairo Airport was inspected | April-2026 |



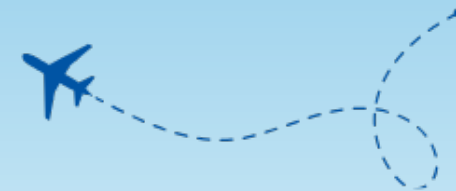
05 Case study for migratory birds

- HURGHADA INTERNATIONAL AIRPORT



2.4.1.2 A good working relationship with neighboring stakeholders is an essential first step in protecting the interests of an aerodrome and its clients.(EAC 139.20)

The Hurghada International Airport is positioned directly underneath the Rift Valley-Red Sea Flyway, the second most important avian migration route globally. This funnels more than 1.5 million migratory birds across the coastal strip annually.



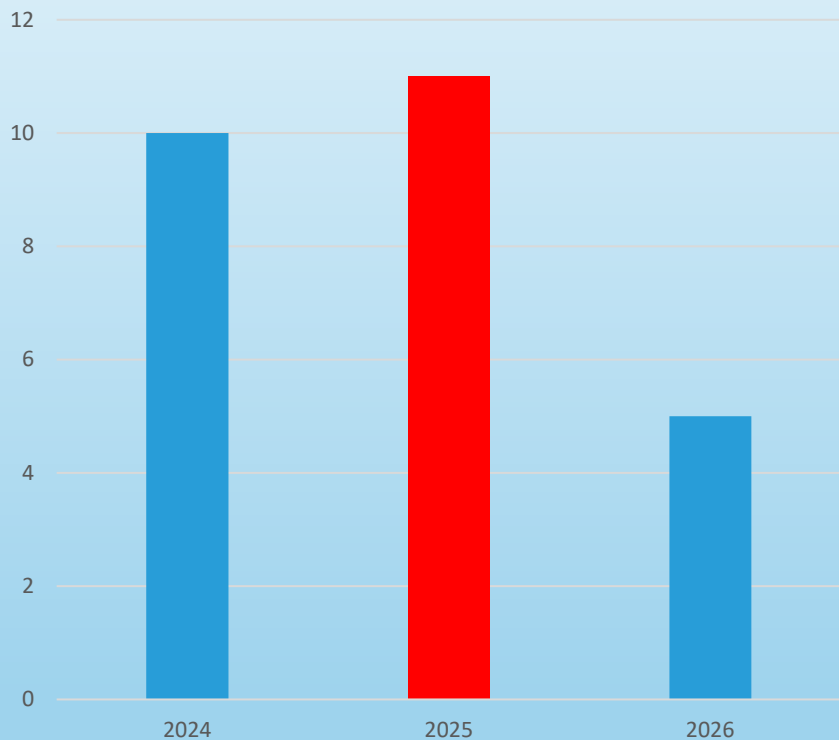
• AERODROME SAFEGUARDING DATA & LOCAL ATTRACTANTS

• A Joint Assessment conducted by the ECAA and the Egyptian airports company within the 13-kilometer safeguarding radius of HEGN maps the following critical risk vectors.

Attractant Category	Primary Local Sources (Hurghada Sector)	Risk Profile & Avian Species Affected
- Open Food / Waste	-Public waste landfill , open municipal waste dumps, resort organic disposal bins.	- High Risk : Attracts resident populations of (White-eyed Gulls) and House Crows and also white storks in season of migration
-Surface Water	Uncovered wastewater treatment facilities, hotel decorative lagoons, resort artificial wetlands.	- Medium-High Risk : Serves as a staging ground for migratory waterfowl and waders during peak seasons
-Rooster / Cover	High-density palm tree landscaping within resort strips, abandoned structures, flat commercial roofs	- Medium Risk : Offers immediate nesting and roosting areas for feral pigeons and raptors.

•By close monitoring we found the root cause for increasing the rate of bird strikes in Hurghada AD. especially during approach phase which **is the public waste landfill** that locates 9 KM south

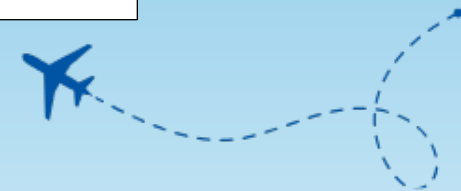
no of strikes in Hurghada int.ad



No of strikes in Hurghada Airport

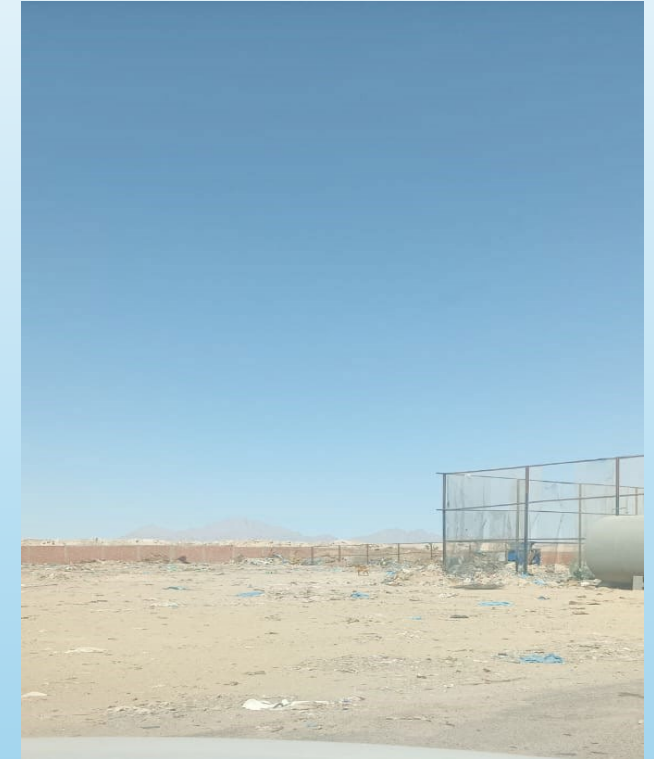


Public waste Landfill before closure



Action taken by ECAA

- In accordance with ECAA Civil Aviation Regulations (ECAR) Part 139, the Authority exercises binding jurisdiction over land-use planning around aerodromes to mitigate wildlife hazards:
- ECAA take the action to close the public waste landfill in collaboration with the local government and move it to another place that locates 19 kilometres south away from the airport



Public waste landfill after closure

-MID/13



06

Case study for Resident birds

- **Cairo
INTERNATIONAL
AIRPORT**



ECAA conducts quarterly inspections for evaluating aerodrome's Wildlife Hazard Management Programme (WHMP), checking logs for active dispersal mechanisms (e.g., falconry, bio-acoustic)

The Success of bird Hazard Control Methods at Cairo International Airport

Resident birds, especially pigeons and crows, represent one of the main operational concerns **at Cairo International Airport** due to the risk of bird strikes with aircraft.

Monitoring and dispersal equipment, particularly binoculars and acoustic bird deterrent systems, have contributed to reducing these risks and improving aviation safety procedures.

However, maintaining the effectiveness of this system requires continuous development, the use of modern technologies, and the implementation of an integrated strategy combining monitoring, bird dispersal, and environmental management around the airport in accordance with international aviation safety standards

- 1-The Bird and wildlife hazards represent a significant hazard to aviation safety**
- 2- The bird and Wildlife activity near runways increases operational risk**
- 3- Cairo International Airport uses several monitoring and dispersal methods to reduce wildlife strike risk.**





1-binoculars



2-Handheld patrol two



3-Handheld Aero laser



2-Scarecrow premier 2020

Equipments:-

Used for

1-Monitoring and detection

-binoculars

2- Broadcast distress calls (Audio)

-Scarecrow premier 2020

-handheld patrol two

3- laser beam (Physical Touch)

-Handheld aero laser inspired by nature, simulating a natural enemy.



2025



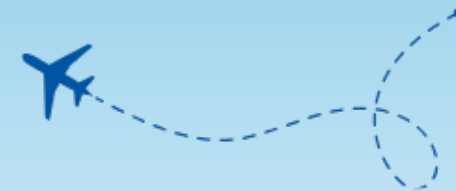
2026

Equipments:-

4- wildlife control vehicles

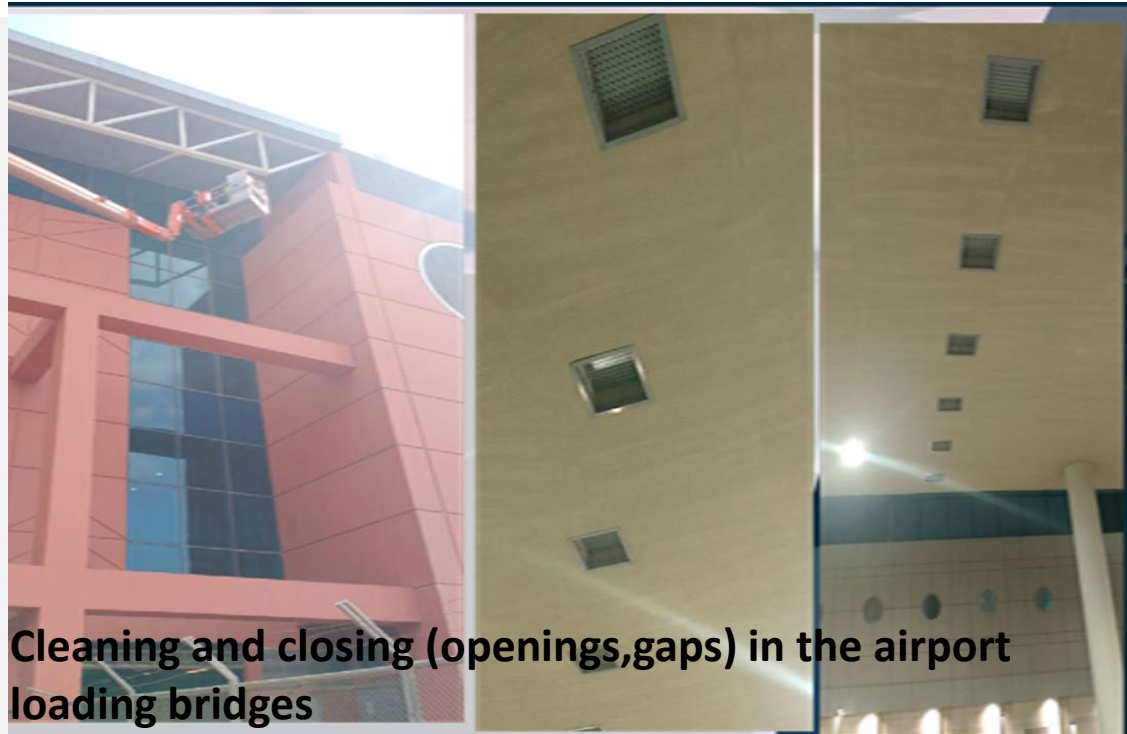
-A sound amplifier device installed inside the vehicle that emits distress calls , equipped with loudspeakers on top of the vehicle.

-International experience has shown that relying on only one method does not achieve the desired results, whereas integrating Visual monitoring with Acoustic deterrent systems, and habitat management leads to a significant reduction in bird strike incidents with aircraft.

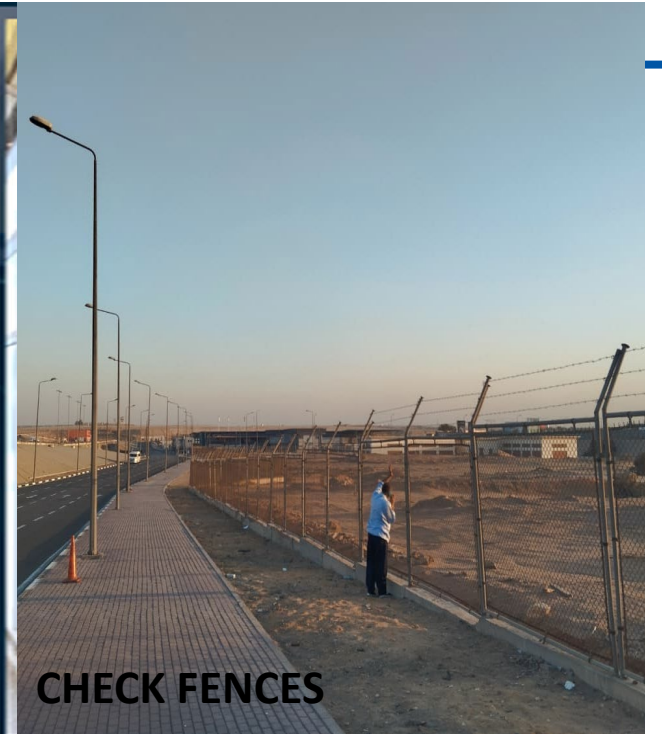




Installing invisible netting



Cleaning and closing (openings,gaps) in the airport loading bridges



CHECK FENCES

-Regular inspections are carried out on **fences** and they are continuously maintained to prevent wildlife from entering the AERODROME."

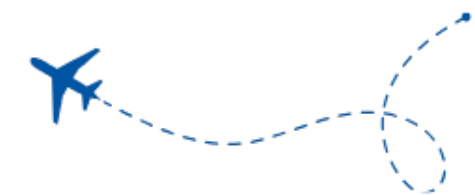
SO **Results of internal coordination** on the aerodrome or within terminals to eliminate root causes and implement environmental modifications at attraction sites, such as sealing bridge openings and buildings that allow birds to nest."



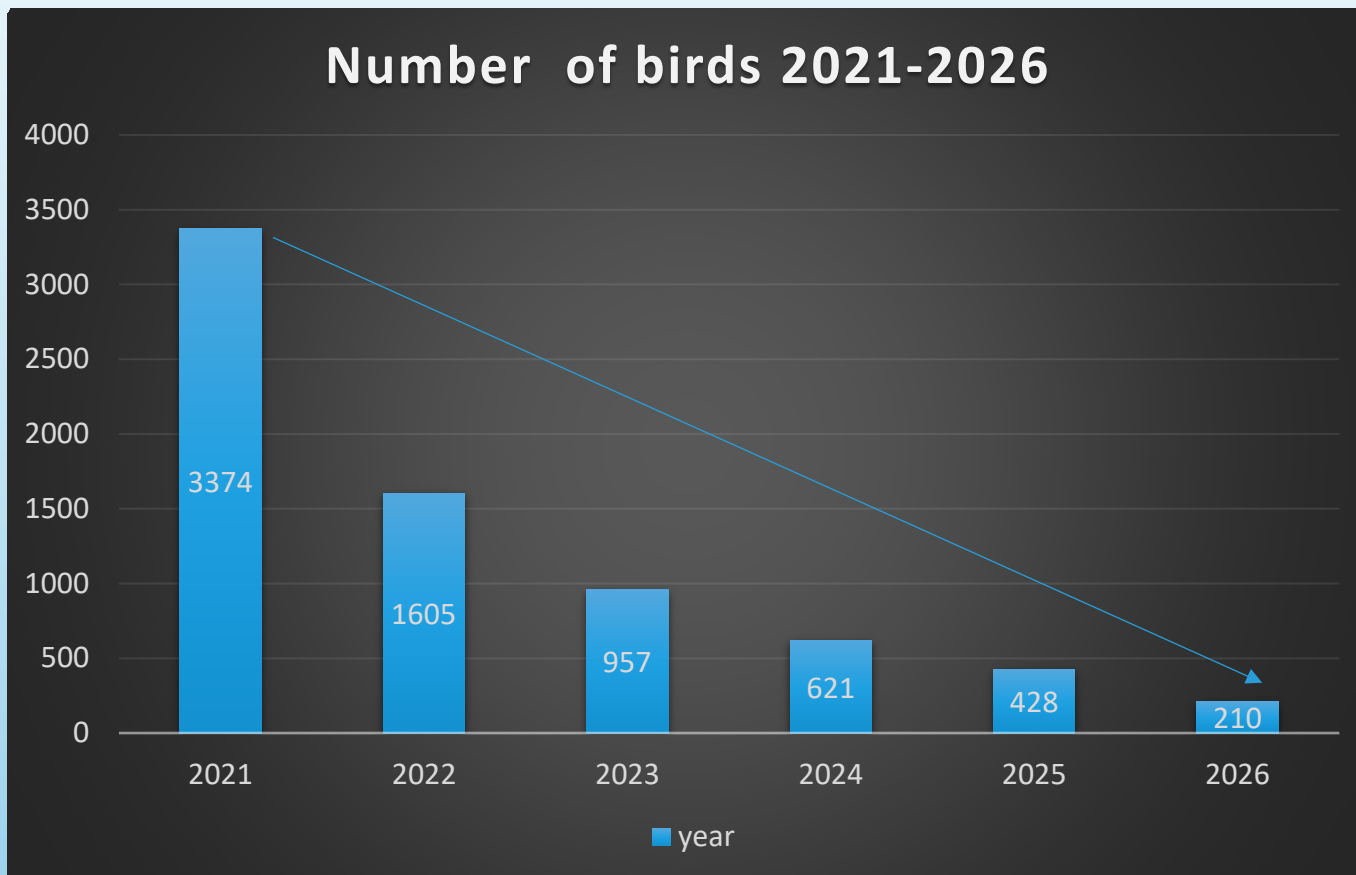
Video shows how birds captured by mechanical methods



Video shows how birds dispersed after using scarecrow premier 2020



Video shows how birds dispersed after using aero laser



- In parallel the aerodrome is Contracting with wildlife and bird control company which has Shelter Center) and has equipped with all mechanical and biological tools under Supervision by the wildlife team at General Department of Environment in the aerodrome

All Data were collected during routine wildlife patrol operations. by wildlife patrol team

- **The graph shows the** Number of resident birds captured inside or outside the Aerodrome . Whether as a result of operational reports or through inspections and routine daily activities

Which indicates Decrease in the number of birds.



Action taken by ECAA

- Cairo Airport was inspected (April-2026)
- The ECAA can focus on evaluating the effectiveness of bird monitoring and dispersal equipment at Cairo International Airport by linking their performance to bird strike rates and conducting continuous field assessments of operational efficiency, maintenance, and response time.
- ECAA also monitors upgrading and modernizing these systems to ensure they are suitable for resident bird species and to enhance overall aviation safety standards.

Thank You