

**CYPRUS' FLAMINGOES COMMUTING ACROSS THE RUNWAY:
ADAPTING THE AIRCRAFT'S OR BIRDS' FLIGHT SCHEDULE?**

Albert de Hoon¹, Iris Charalambidou², Luit Buurma³ & Emiel van Loon⁴

¹ Email: albertdehoon@hotmail.com

² Manager Birdlife Cyprus, Email: iris.chara@cytanet.com.cy

³ Email: luitbuurma@worldmail.nl

⁴ Statistician University of Amsterdam, Email: vanloon@science.uva.nl

Abstract

Cyprus is a popular holiday destination. Most tourists enter the country by plane via Larnaca airport. The water bodies surrounding the airport attract many waterfowl, including up to 4,000 Flamingoes. Commuting between those different water bodies, the birds cross the runway and pose a threat to the departing and landing aircraft.

According to the new ICAO standards, ***the bird strike hazard shall be assessed and appropriate action shall be taken to decrease this hazard.*** Although data of bird strikes at Larnaca airport are missing, it's obvious that the waterfowl and especially the Flamingoes, with their big numbers, big size and poor manoeuvrability, are a potential hazard while crossing the runway.

According to the EU Habitat and Bird Directives, ***areas of nature importance and their species shall be protected.*** The wetland complex surrounding the airport will be designated as a special protection area with special interest for the conservation of the Flamingo.

What to do with these conflicting laws?

We compared two opposite strategies; how do the bird control units of JFK New York and Woensdrecht (NL) deal with gulls crossing their runways? Which strategy is the best to reduce the risk of colliding with Flamingoes at Larnaca airport?

Key words: bird control, bird strike, commuting birds, aircraft movements, flight schedule, airport vicinity, ICAO, nature laws, Cyprus, Flamingo.

INTRODUCTION

Commuting birds

Not only birds present at airports, but also birds in the airport vicinity may pose a threat to departing and landing aircraft. Many species, among which gulls, geese, cormorants, ducks and flamingoes, have (partial) separate foraging and roosting sites. If these sites are on both sides of an airport, the birds' commuting flights between these sites coincide with the flight path of the aircraft.

Flamingoes around Larnaca airport

Cyprus is a popular holiday destination visited by tourists from Europe, Russia and the Middle-East. Larnaca is its largest airport with 2.5 million passengers and 45,000 aircraft movements per year. The airport of Larnaca is surrounded by several water bodies that are important overwintering and migratory stop-over sites for thousands of waterfowl. During the winter months, up to 4,000 Flamingoes (*Phoenicopterus ruber*) stay in the lake complex surrounding the Larnaca airport. They fly frequently between the different water bodies. Although data of bird strikes at Larnaca airport are missing, it's obvious that the Flamingoes with their big numbers, big size and poor manoeuvrability, are a big hazard.

ICAO bird strike standard

According to the ICAO bird control standards, ***the bird strike hazard shall be assessed and appropriate action shall be taken to decrease this hazard.*** What action is appropriate? For most people, the instinctive reaction is: "Kill the pink winged rats!" Is that a good solution? Let's look at the following example...

BIRDS

Laughing gulls at JFK New York

Adjacent to New York JFK airport (USA) a colony of a couple of thousand Laughing gulls is present in the marshes of Jamaica Bay Wildlife Refuge (JBWR) during the breeding season (May till September). Not only the JBWR marshes are protected under strict nature laws, but also all birds, nests and eggs within its borders. For this reason, affecting the gulls, their nests, eggs or habitat is strictly forbidden. The gulls' feeding grounds are widespread throughout metropolitan New York. Making these feeding grounds in this vast and urban area less attractive is asking for the moon. Thus, controlling the birds at both their breeding and feeding areas is impossible.

Since the safety of the aircraft was at stake, JFK decided to use the shotgun within the airport fences. As many gulls as possible that fly over the airport are being shot in an attempt to divert their flying route to avoid the airport. A gull strike reduction of 97 % was obtained by shooting a total of 70,000 gulls in the last 15 years (Dolbeer, IBSC26/WP-BB5, 2003).

Nature laws in Cyprus

In Cyprus different nature laws (for example the European Union Habitat & Bird Directive) regulate the protection of the Flamingoes and other waterfowl. According to these laws, ***areas of nature importance and their species shall be protected.*** This implies, in contrary with the New York laughing gulls, that the Flamingoes themselves, regardless their geographical position, are fully protected. This makes it illegal to shoot them when they fly over Larnaca airport.

The ICAO standards and nature laws are diametrically opposed to each other. What to do with these conflicting laws? Is there a way out?

Gulls at Woensdrecht pilot school airbase, The Netherlands

Outside the breeding season, up to 16,000 gulls (Black-headed, Common and Herring) roost in the huge wetland of the Markiezaatsmeer west of the pilot school airbase of Woensdrecht (NL). This is a small airbase with just one runway, east-west orientated. They feed on soil invertebrates in a vast agricultural area east of the airbase. Around dawn and dusk the gulls commute through air bridges between the roost and feeding sites and pose a threat towards departing and landing aircraft while crossing the runway. Like at JFK, the only place to control the gulls is at the airport itself. But, like Cyprus, The Netherlands have to abide nature laws that not only protect the birds in their habitats, but at any place, also when they fly over the airport. How to safeguard the aircraft? Is there a way out?

