

Influence of garbage dumps far from Barcelona-El Prat Airport on hazards posed by yellow-legged gulls



Ferran Navàs
Xavier Ferrer
Carme Rosell



Photo: Albert Cama

Ferran Navàs¹, Xavier Ferrer^{2,3}, Carme Rosell^{1,2}

1 MINUARTIA, Environmental Consultancy.

2 Department of Evolutionary Biology, Ecology, and Environmental Sciences. University of Barcelona

3 Biodiversity Research Institute (IRBIO). University of Barcelona

The work was performed within the frame of the Wildlife Hazard Management Plan of the Barcelona-El Prat Airport.

Acknowledgements:

- ✓ Safety Department of the Barcelona-El Prat Airport: Juan José Hita (Safety Manager), Noelia Bravo and Montse Molina.
- ✓ Catalan Ornithological Institute
- ✓ Landfill management companies.
- ✓ Andreu Ubach, Raül Bastida, Víctor Sanz Sánchez, Daniel Díaz-Diethelm, Pau Esteban, Marc Illa Llobet, Ferran López, Rafael González de Lucas, Santiago Guallar, Enric Sanllehí, Albert Petit, Oriol Baltà, Marc Gàlbez, Tomás Montalvo, Enric Carrera y Albert Martínez Vilalta.

Location of Barcelona-El Prat Airport





Cornellà de Llobregat

BARCELONA

Sant Boi de Llobregat

El Prat de Llobregat

Llobregat River

Nature reserve

Barcelona Airport

Nature reserve

The yellow-legged gull

Larus michahellis

Large bird (ca. 1,100 g)

Gregarious

Resident breeding species, with the main abundance in the post-breeding season

Used to exploit human resources



Initial situation

Until 2006 gulls commute every day overflying the airport or aircraft flight paths:

- ✓ Main roosting site: El Prat beaches (up to 15,000 individuals)
- ✓ Foraging sites:
 - Garbage dump, 13 km from the ARP
 - Outdoor waste-transfer station, 4 km from the ARP.



Situation changed in 2006

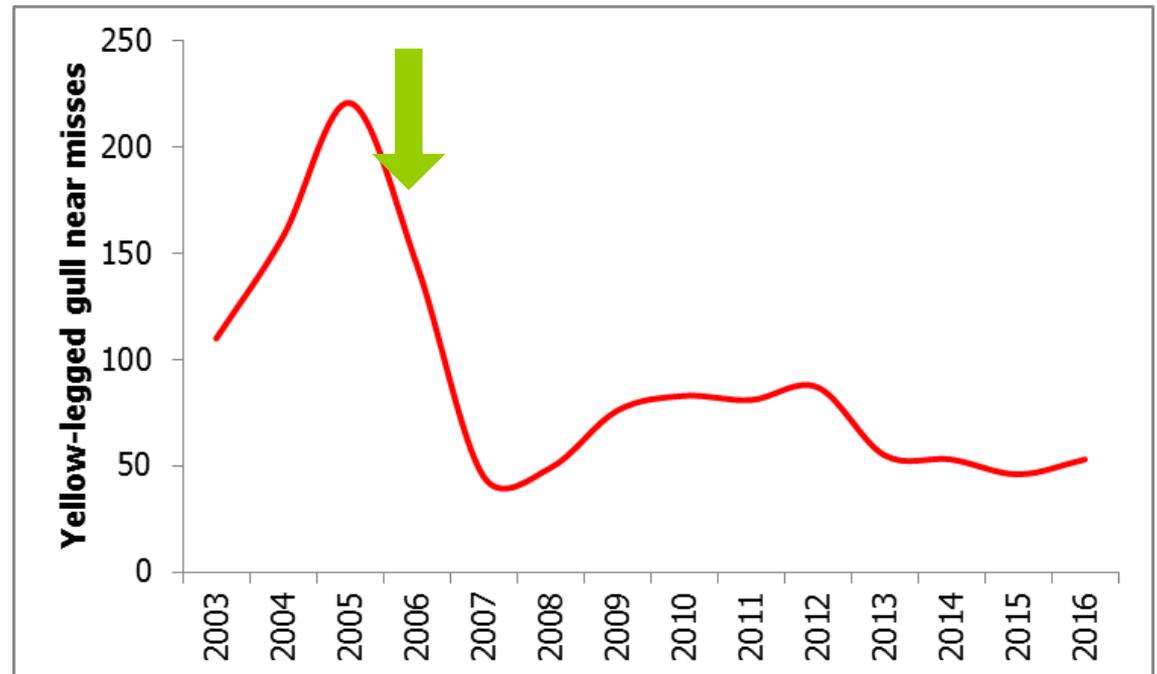
The garbage dump was closed.

The waste-transfer station inaugurated new covered facilities.

Falconry was implemented at existing garbage dumps up to 50 km.

The population in the coast near the airport plummeted and near misses around the airport went down.

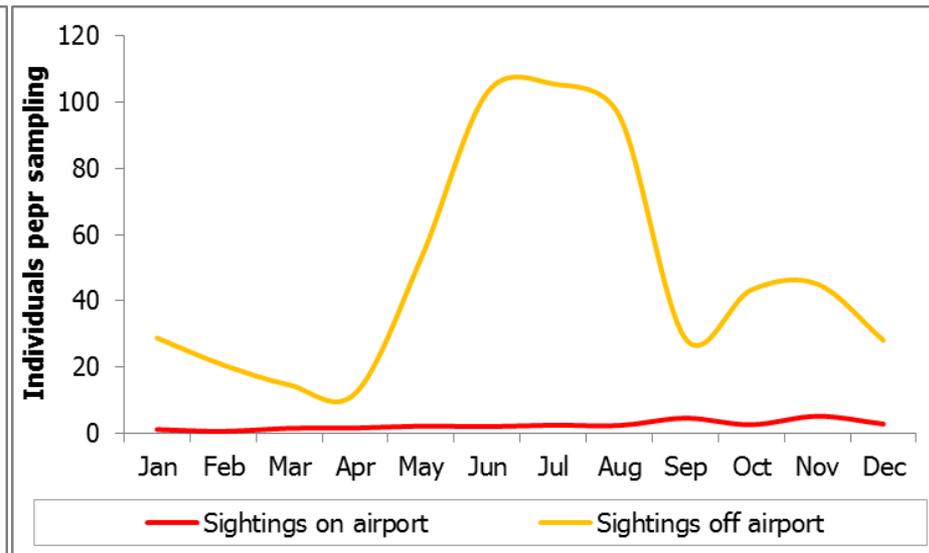
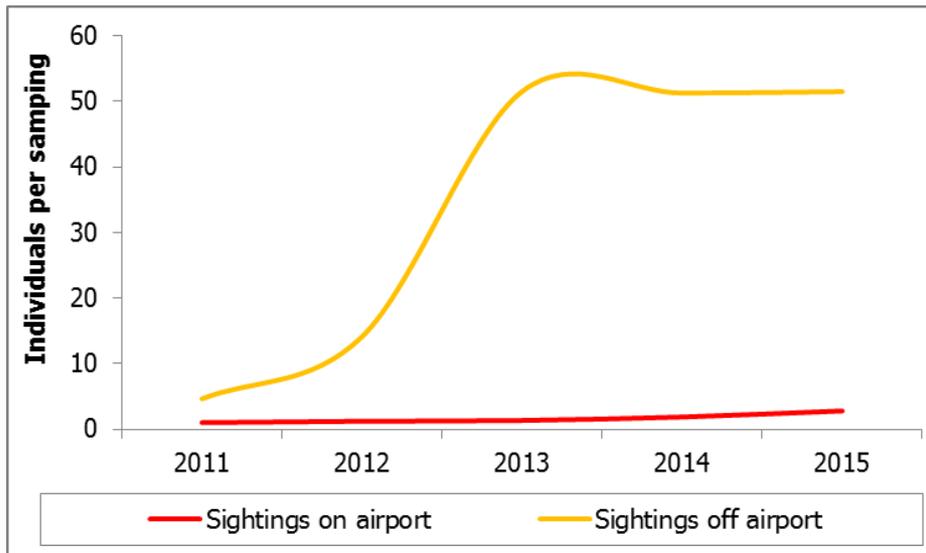
According to the risk assessment matrix the Y-L gull is still a **high priority species**.



Recent evolution of the species

According to the censuses performed in a fortnightly monitoring scheme:

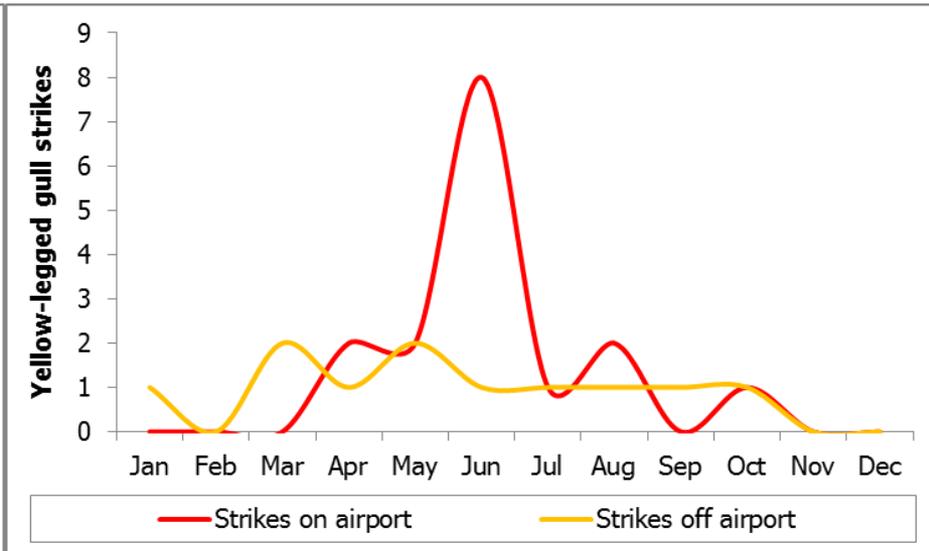
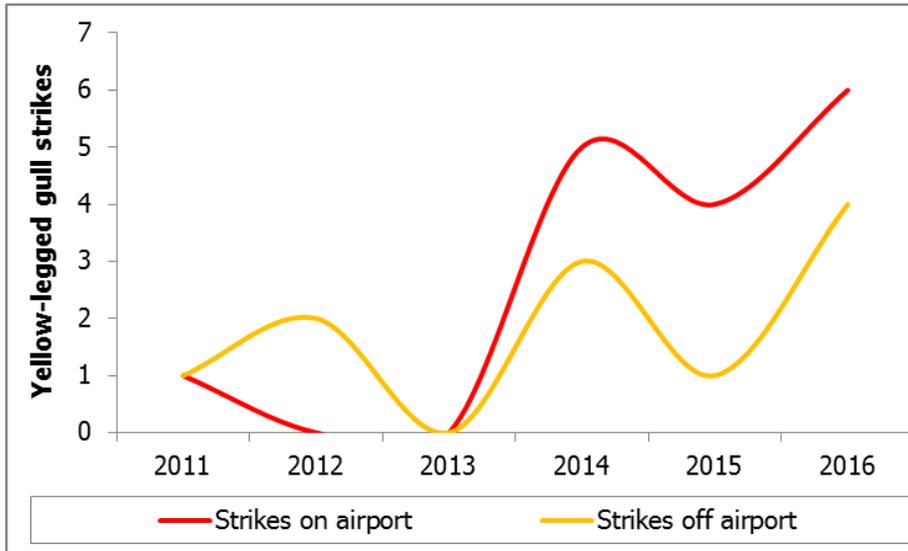
- ✓ Since 2013 the species abundance in the airport surroundings has increased.
- ✓ Yellow-legged gull appears in the vicinity of the airport mainly in late spring, summer and autumn.



Strikes during the period 2011-2016

The Airport database has registered 27 strikes:

- ✓ Is the 5th species in number of strikes.
- ✓ Only 2 strikes caused damage or effect on flight.
- ✓ 33% of strikes occurred in June, when juveniles disperse.



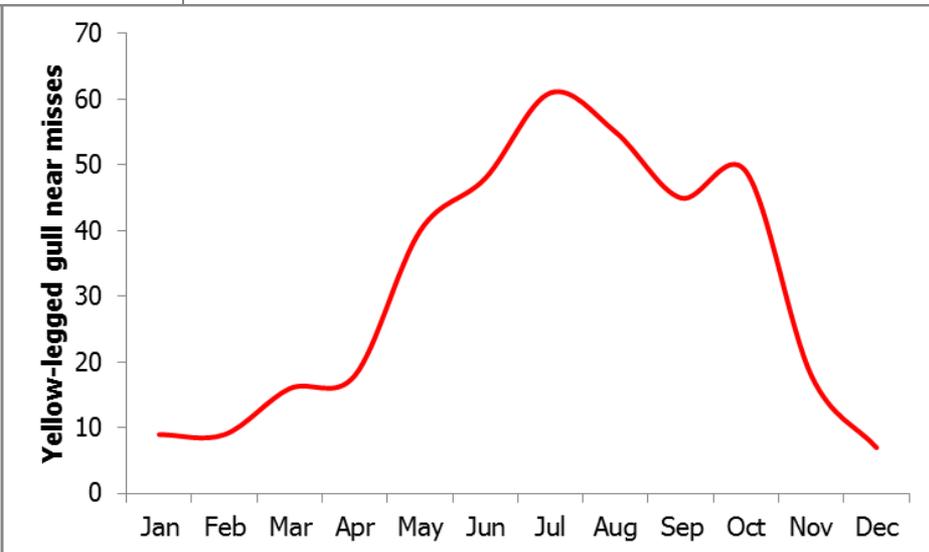
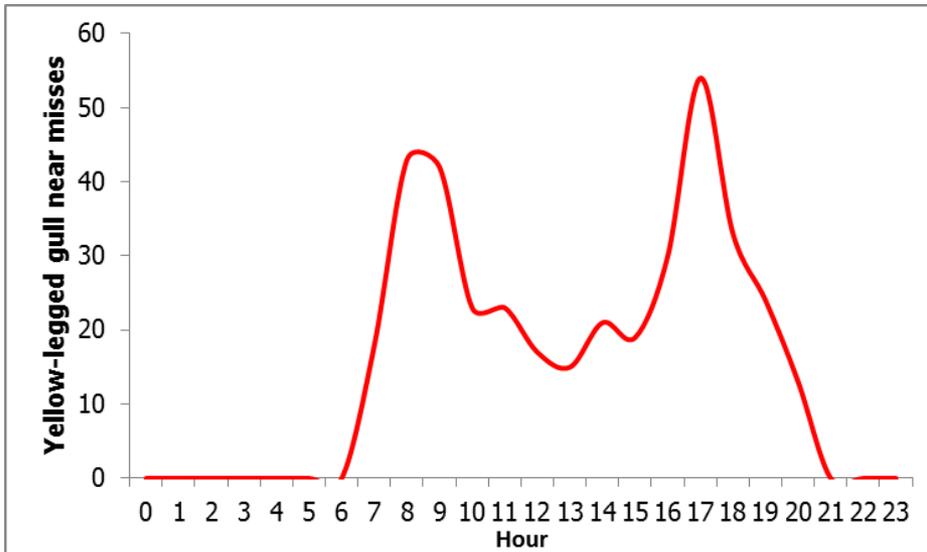
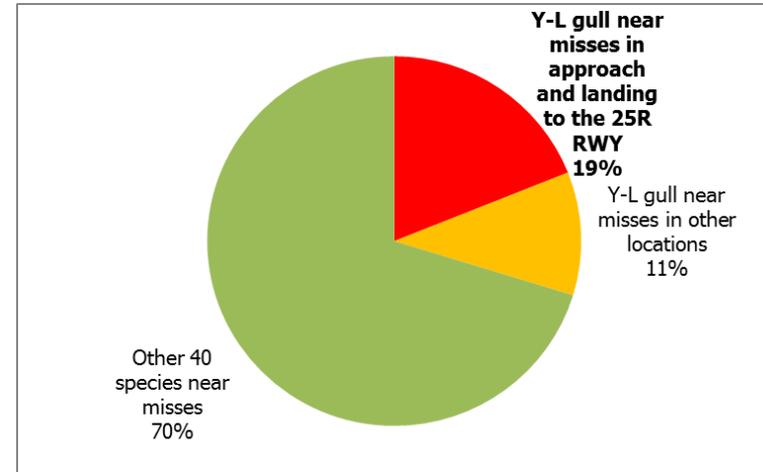
Near misses with yellow-legged gull

Is the first species in number of near misses: 30% of the total.

The highest number of near misses occur in June-October.

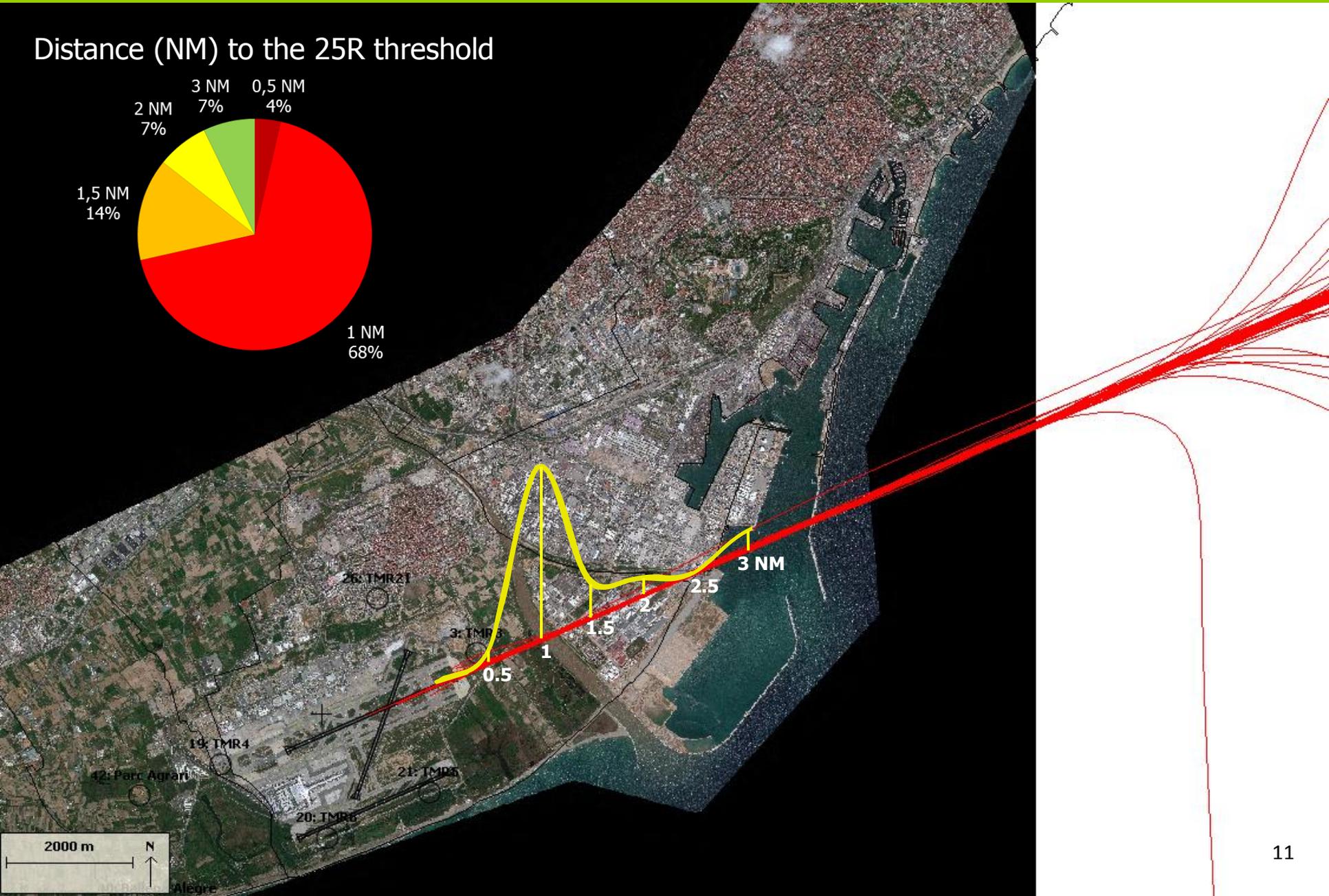
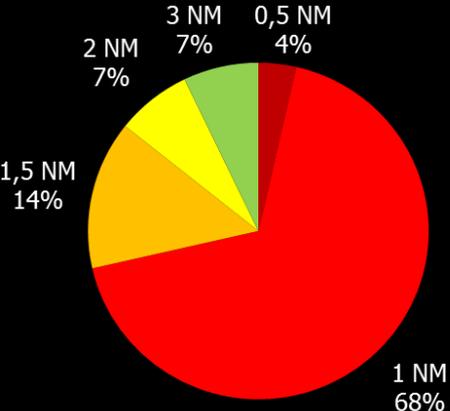
Two daily peaks: around sunrise and in the afternoon.

64% of near misses in the approach and landing to the 25R RWY.

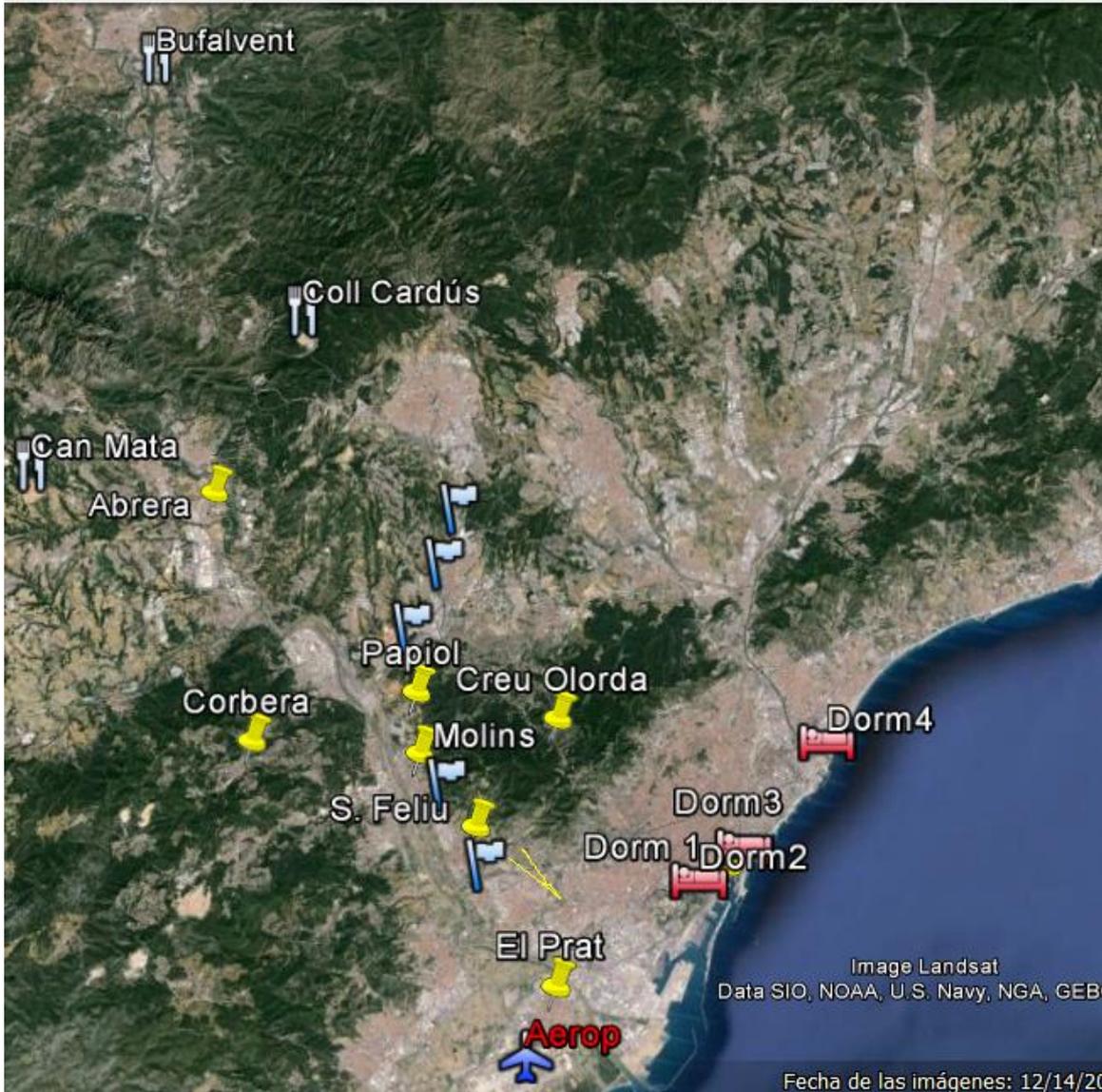


Location of near misses on approach to the 25R RWY

Distance (NM) to the 25R threshold



Previous information on the species



Roosting sites in the coast.

Movements across the Llobregat river valley.

Individuals foraging at three garbage dumps.



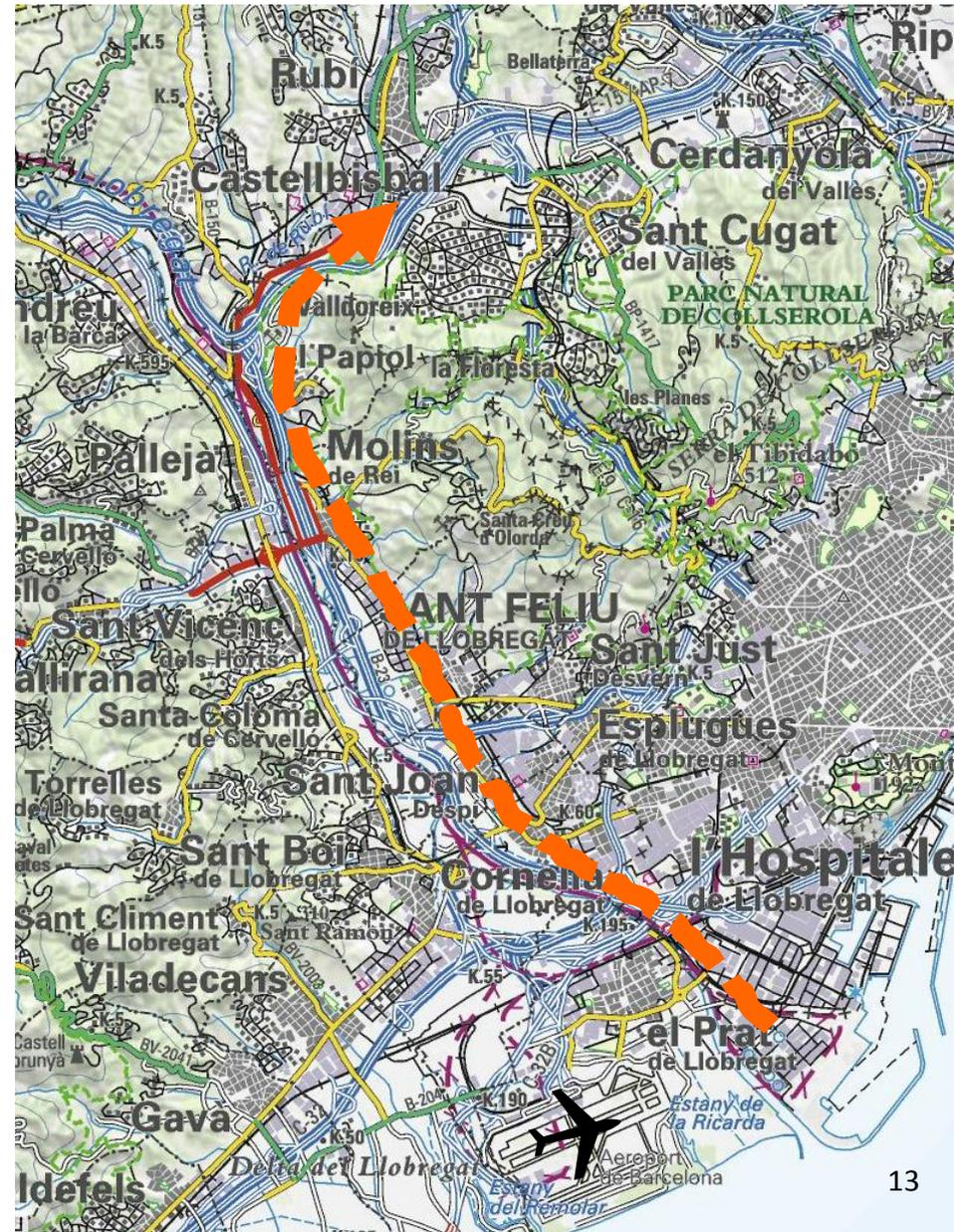
Survey of the valley of the Llobregat river

Two consecutive mornings on October 2015.

The Y-L gulls use the valley of the Llobregat river as a corridor for their daily movements, mainly just after sunrise.



Photo: Xavier Ferrer



Survey of garbage dumps up to 50 km

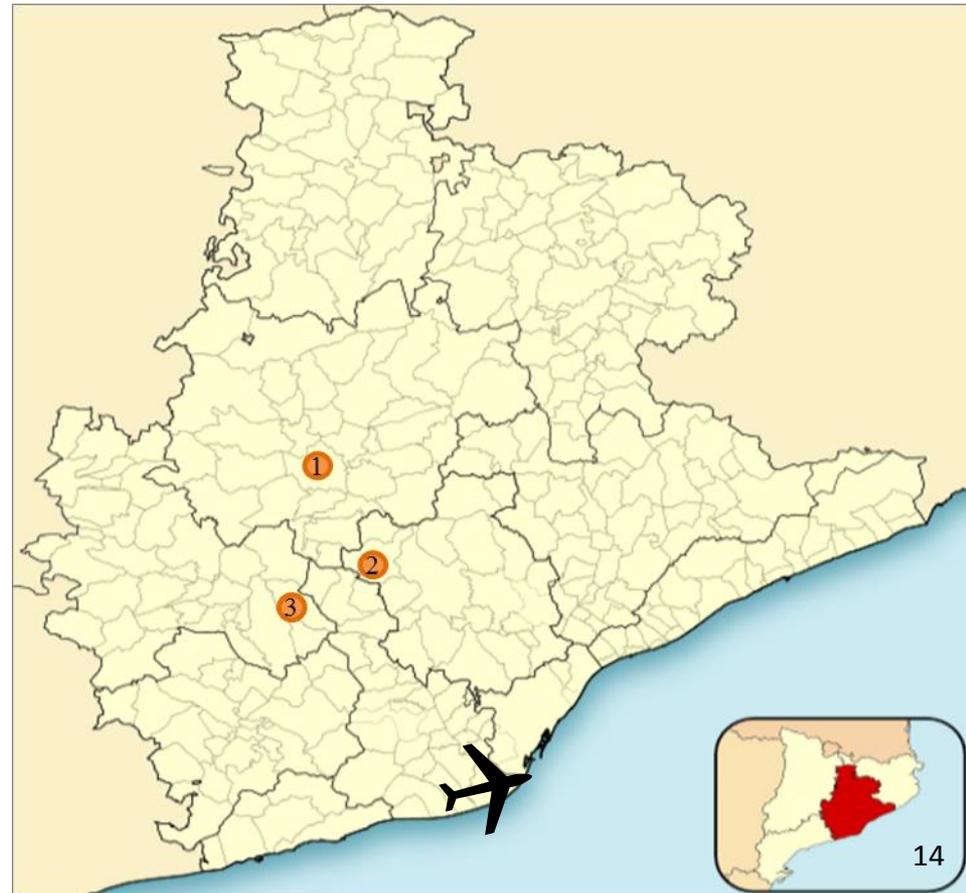
Three garbage dumps were visited.

All of them use falconry to avoid gulls to access the waste, but only few hours every day.

Y-L gulls wait on the roof of buildings near the dumps until falconers leave.

When chased away, Y-L gulls fly to another garbage dump.

	1 Bufalvent	2 Coll Cardús	3 Can Mata
Coll Cardús	14.8 km		
Can Mata	19.8 km	13.2 km	
Barcelona-El Prat Airport	48.9 km	33.9 km	34.3 km



In 15 min. 700 Y-L gulls in Can Mata garbage dump



In 15 min. 700 Y-L gulls in Can Mata garbage dump



Conclusions

- ✓ Yellow-legged gulls roost in the coast and fly every morning to the garbage dumps inland, following the valley of the Llobregat river.
- ✓ Falconry as applied at garbage dumps is not enough to keep the Y-L gulls away, allowing them to forage and gain enough energy for the day.
- ✓ In the afternoon the Y-L gulls return to the coastal roosts.
- ✓ During their daily flights, Y-L gulls intercept the main approaching path of the airplanes to the airport, posing a great risk to safety.
- ✓ Involvement of stakeholders is needed to implement additional measures outside the airfield (and outside the 13 km radius).



Photo: Xavier Ferrer



Photo: Xavier Ferrer

Further steps to reduce Y-L gulls hazards

- ✓ Conclusions were exposed at two meetings with airport operator, administrations, airlines and other external stakeholders, including the Waste Agency of Catalonia.
- ✓ A meeting with the garbage dumps management companies will be held early next year.
- ✓ Proposal of measures to be discussed:
 - The falconry service should be extended from sunrise to sunset.
 - The use of other dispersal techniques is needed.
 - Access to waste should be reduced.

Thank you.

Comments are welcome.

