Wildlife Strikes in Polish Air Force

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WBA Bird/Wildlife Strike Prevention Conference, Santa Fe (Mexico City, Mexico), 20-24 October 2014

World Birdstrike Association

WILDLIFE STRIKES IN POLISH AIR FORCE

annual BS costs similar
to Royal Netherlands AF

Direct cost
650 000 USD

1 BS = ca 18 000 USD

WILDLIFE STRIKES IN POLISH AIR FORCE

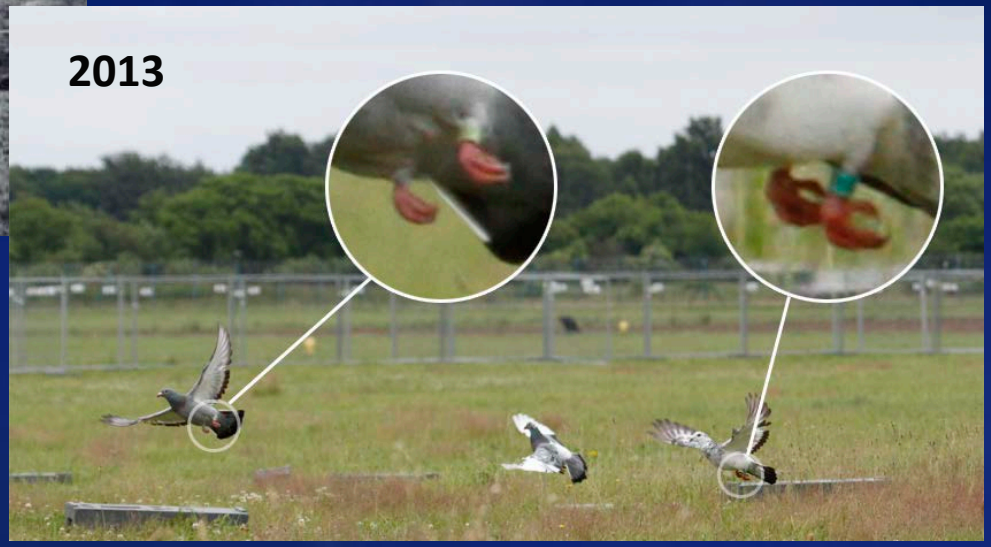
There were two catastrophy due to bird strike in Polish Air Force, both with a flocks of feral pigeon in close proximity to aerodromes:

1983

1965 TS-11 training jet

1983 Mi-14 navy helicopter

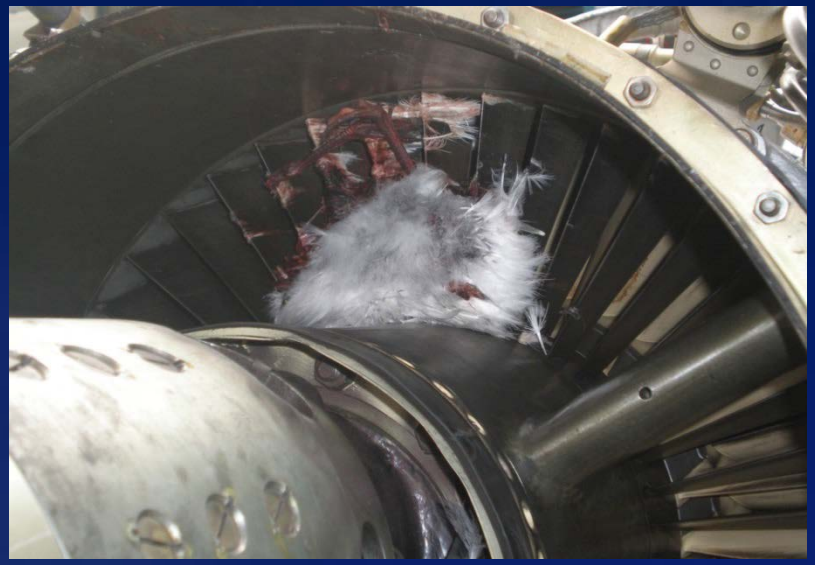
2013



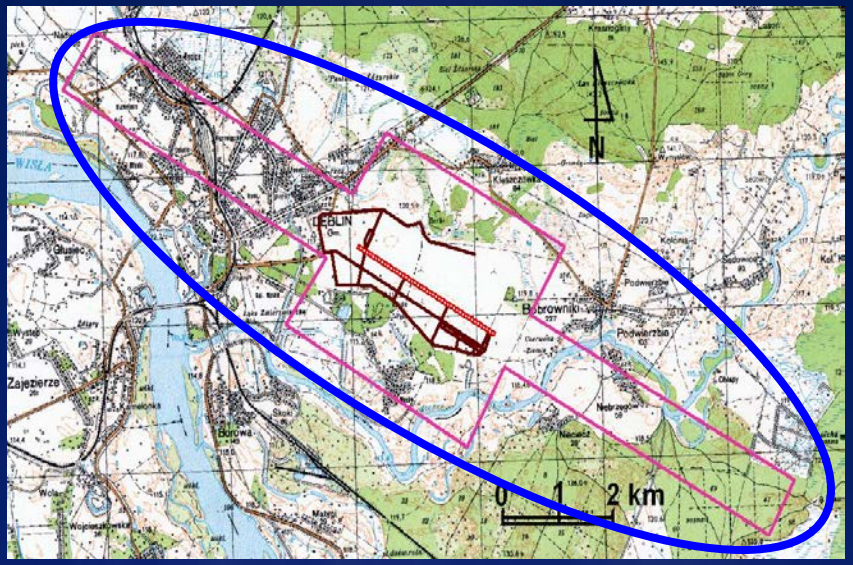
Unfortunately the feral pigeons still present real hazard on many aerodromes in Poland

WILDLIFE STRIKES IN POLISH AIR FORCE

BS Hazard Assessment Project 2007-2010



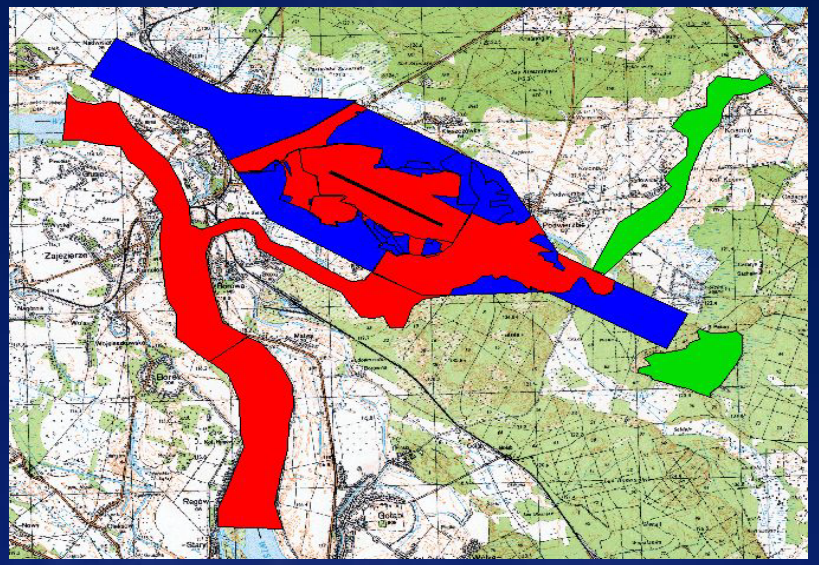
The Military Airport in Deblin – Study Area



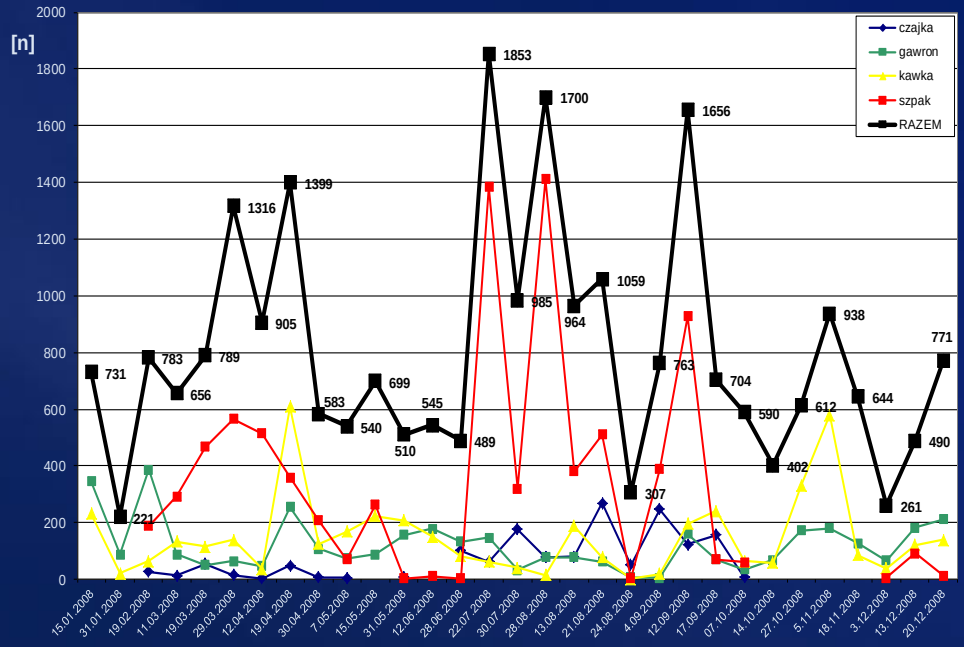
WILDLIFE STRIKES IN POLISH AIR FORCE

Bird concentration areas at the airport and its surroundings, with risk assessment

- low
- medium
- high



Changes in the number of dominant bird species in Dęblin airport in 2008



WILDLIFE STRIKES IN POLISH AIR FORCE

Mitigation techniques consist mostly of:

- falconery (limitation e.g. concerning raptors)
- gas cannon
- voice-repellant.

No pro-active techniques concerning:

- rubbish policy around airport
- grass management
- fencing quality (mammals incursion)

Black-headed Gull
hazardous species along Vistula river

WILDLIFE STRIKES IN POLISH AIR FORCE

Wildlife strikes in years 2009-2013

4 strikes with Roe-deers

50% with A/C damage

landing gear, fuselage, engine

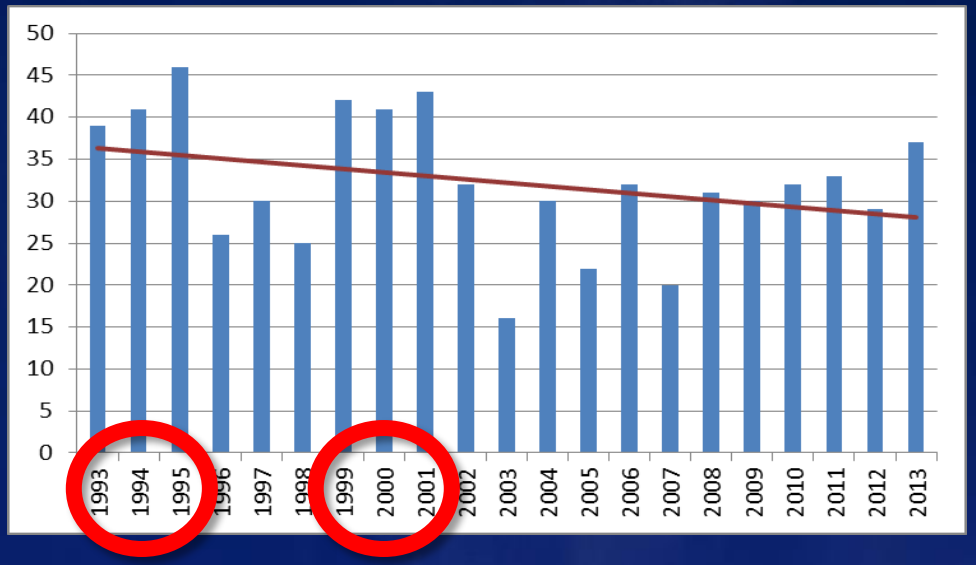
162 Bird strikes

23% with A/C damage

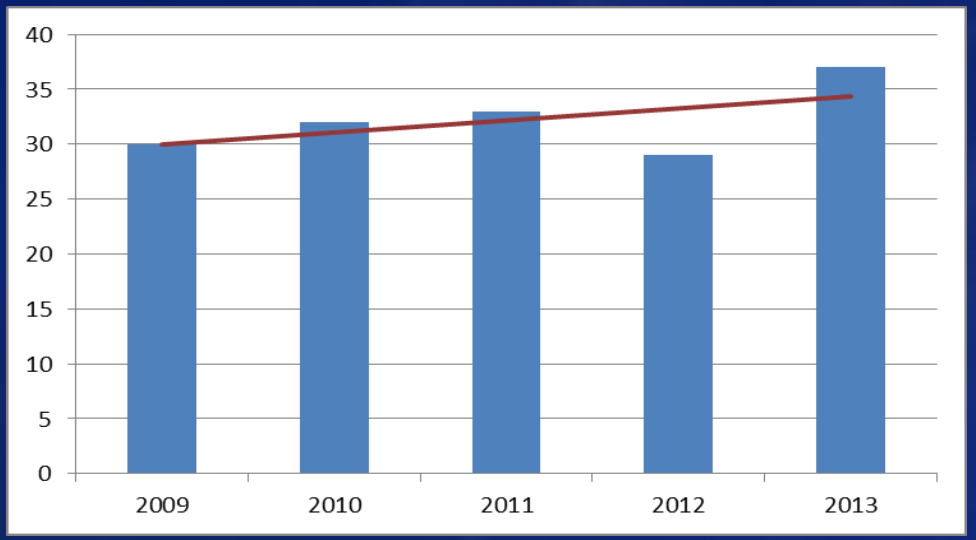
engine, fuselage, wing

WILDLIFE STRIKES IN POLISH AIR FORCE

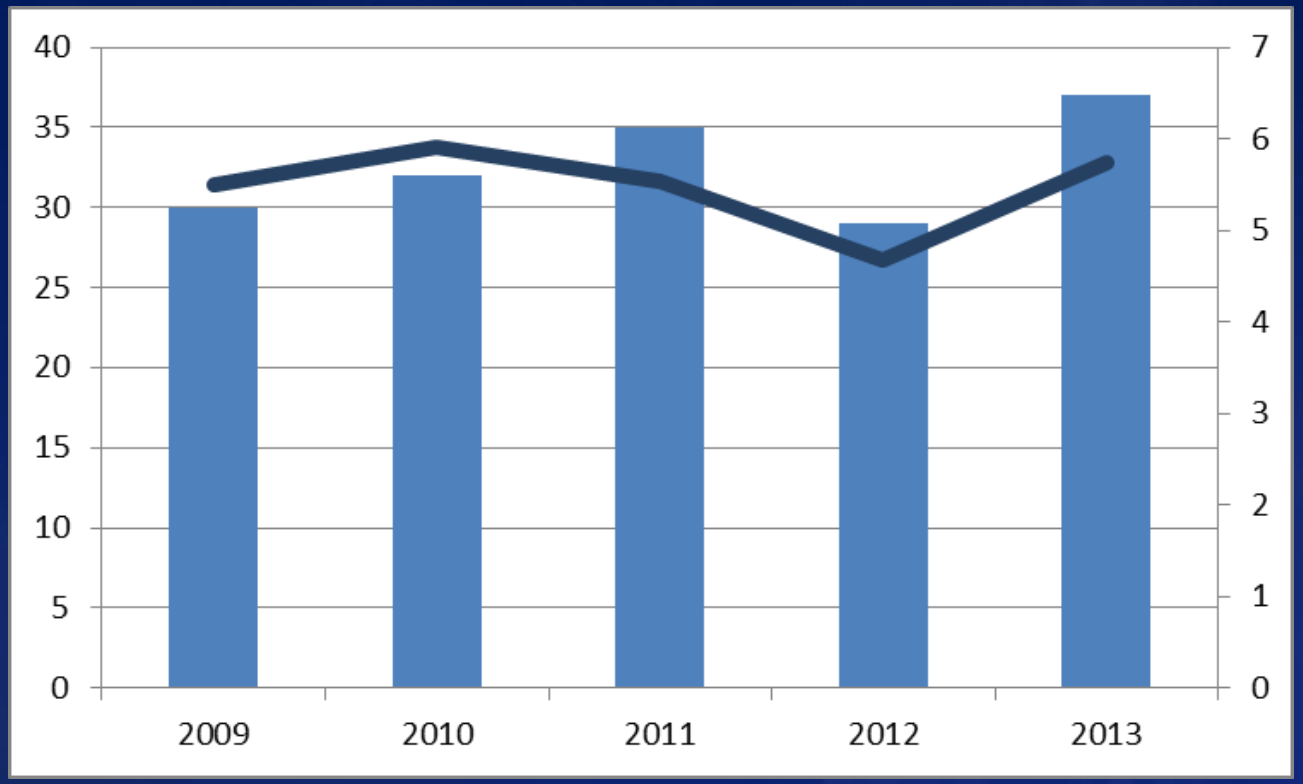
years 2003-2013,
n=678 Bird Strikes
average 23,29 /year



years 2009-2013,
n=162 Bird Strikes
average 32,4 /year

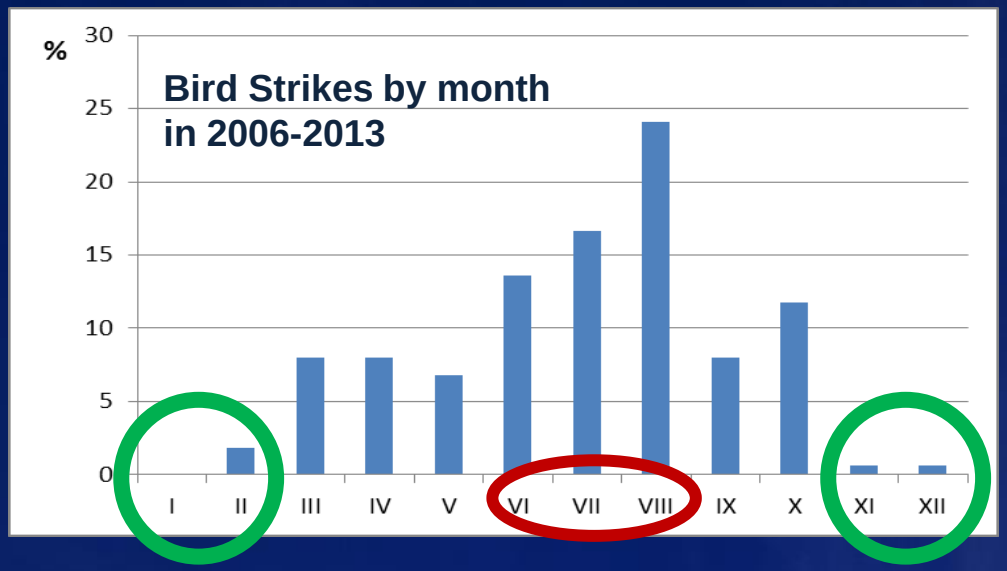


WILDLIFE STRIKES IN POLISH AIR FORCE

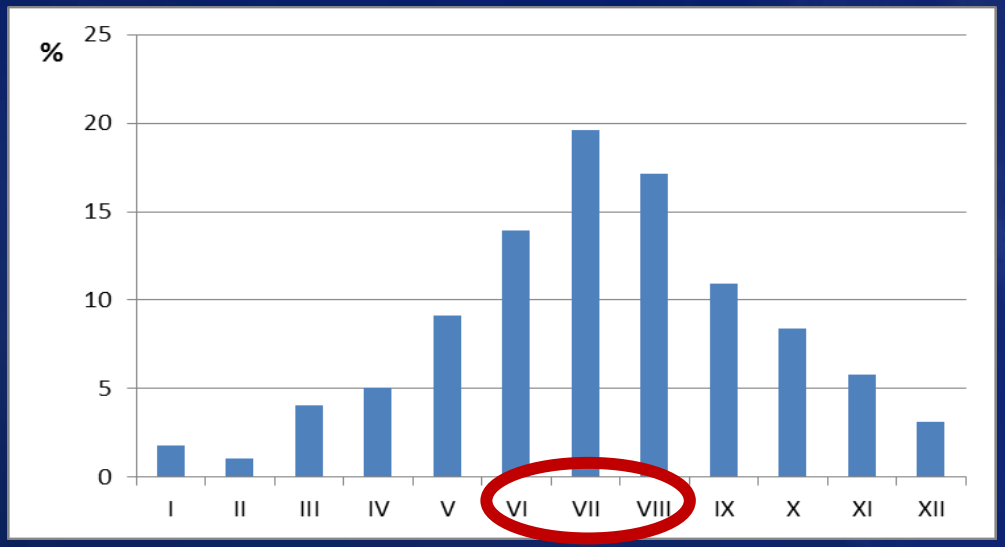


BS (blue column, left axis) and BS rate per 10000 op. hours (dark line, right axis) in years 2009-2013

WILDLIFE STRIKES IN POLISH AIR FORCE



Military aviation
n = 162



Civil Aviation
n = 1241

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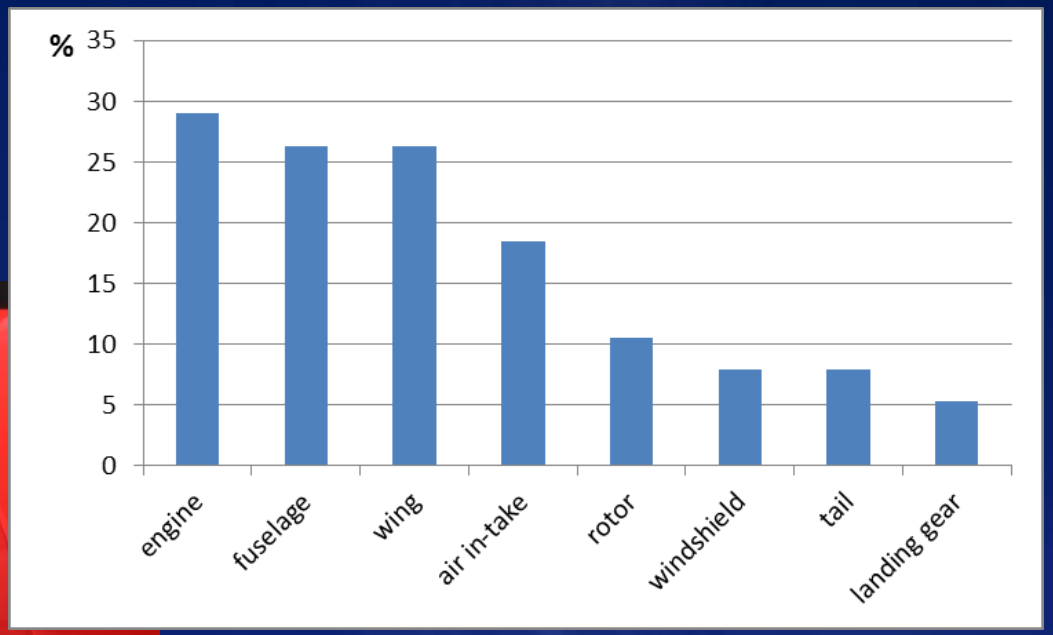
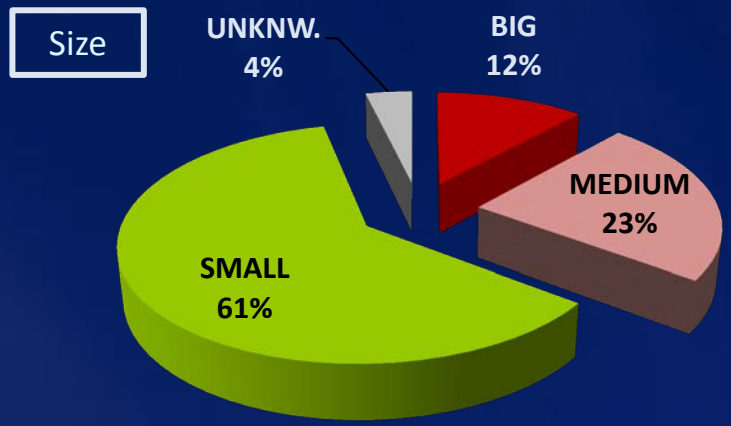
WILDLIFE STRIKES IN POLISH AIR FORCE

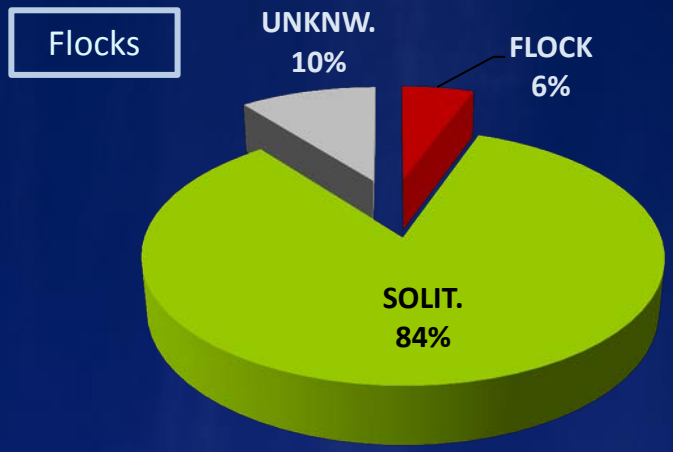
Damage due to wildlife strikes to Polish Air Force aircrafts in years 2009-2013
Some BS result in a few areas to be damage



WILDLIFE STRIKES IN POLISH AIR FORCE

Bird Strikes in years 2009-2013, n = 162





Identified species

Eurasian Crane
Jackdaw
Grey Partridge
Kestrel
Starling
Skylark
Swift

share %	Bird groups
15,4	PASSERINES
6,8	RAPTORS
2,5	PIGEONS
1,9	GULLS
1,2	DUCKS AND GEESE
0,6	PARTRIDGES
0,6	CRANES
0,6	OWLS
70,4	UNKNOWN (114)

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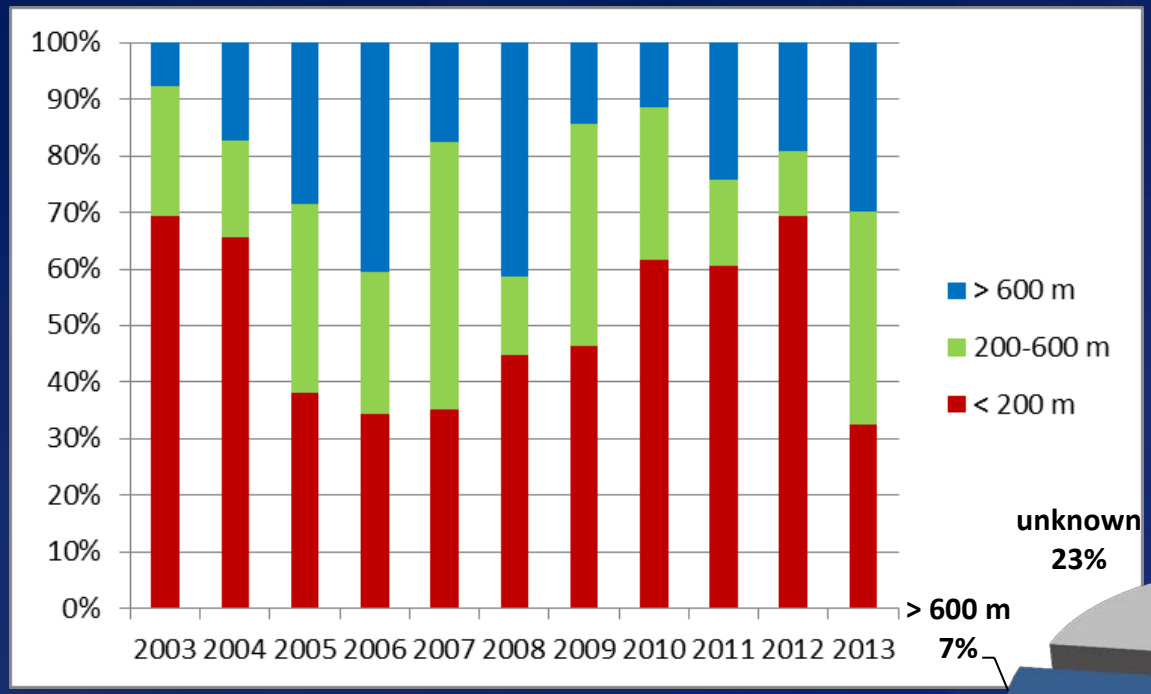
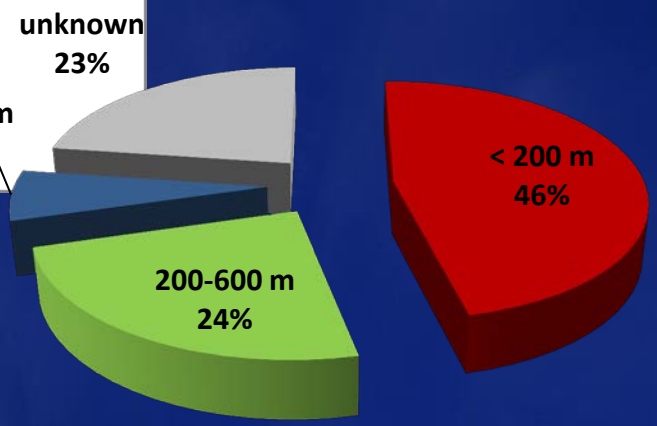
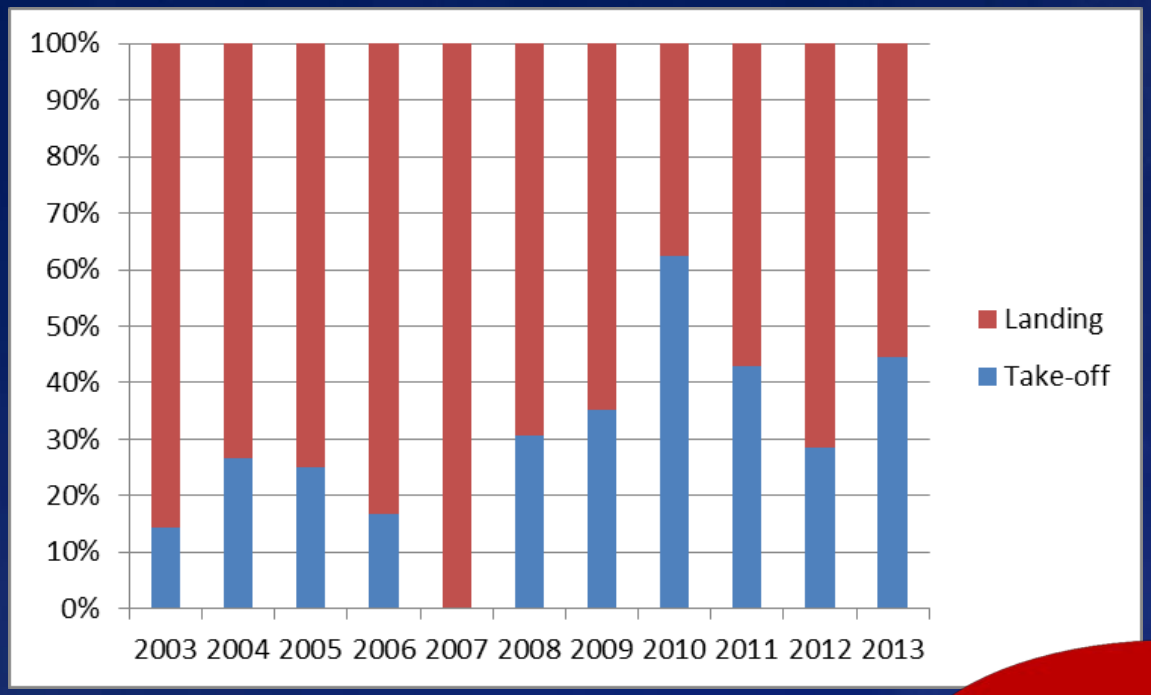
WILDLIFE STRIKES IN POLISH AIR FORCE



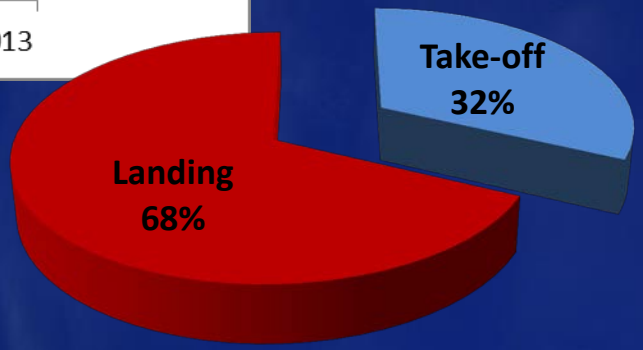


BS and altitudes in years 2003-2013,
n = 312

WILDLIFE STRIKES IN POLISH AIR FORCE



BS during take-off and landings
years 2003-2013, n = 312



WILDLIFE STRIKES IN POLISH AIR FORCE

General conclusions:

Annual BS number – 35/year
BS number slightly increase in last years:
- **in airbase vicinity (mostly take-off phase)**
- **on altitudes < 200 m (partially take-off phase)**

Terrestrial mammals still create a serious hazard

average BS per 10.000 opr. hrs slightly increase:
- **from 5,37 in years 2004-2008,**
- **to 5,50 in years 2009-2013,**
- **max 3,91 in 2004**
- **max 6,32 in 2006**

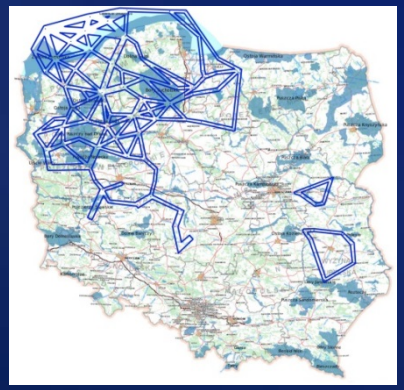
Short-term plans:
- **continue with good and detail BS data base**
- **introduce procedures for BS remains identification**
- **record other incidents with wildlife (e.g. go-around, take-off interrupted etc.)**

WILDLIFE STRIKES IN POLISH AIR FORCE

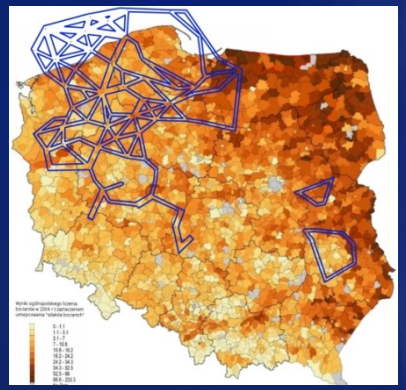
Long-term Plans:

- **Create a national plan for minimizing wildlife hazard for Polish Air Force**
- **Standardize procedures WHMP, risk assessment for airbases, training areas, MRT**
- **Compliance with the proper civil aviation regulation**
- **Compliance with the military and NATO (STANAG 3879) regulations**
- **Compliance with nature protection regulation:**
  nature protection areas and protection species
- **Education and hazard awareness**

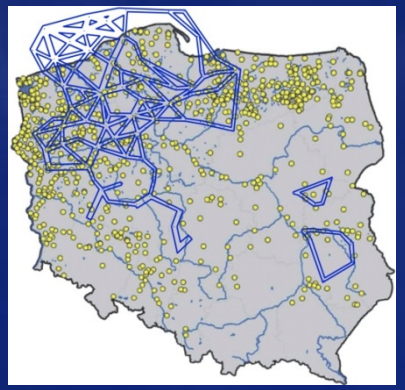
Co-operation with other NATO members



SPA areas Natura 2000



White Stork nest density



White-tailed Eagle nests

Thank you for your attention

Questions?

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