

Developments in Bird Avoidance in the RNLAF

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Reorganisation in RNLAF

- As a consequence of the reorganisation of the Dutch MOD our group was split up:
 - Luit Buurma moved to the MOD, Military Aviation Authority
 - Albert de Hoon moved to RNLAF Flight Safety Department
 - Arie Dekker, Jelmer van Belle and Hans van Gasteren moved from the support branch to the operational directorate of the RNLAF

E-mail addresses in RNLAF

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Bird Avoidance Model

- First phase of BAM/BAS has ended
 - Operational bird prediction model



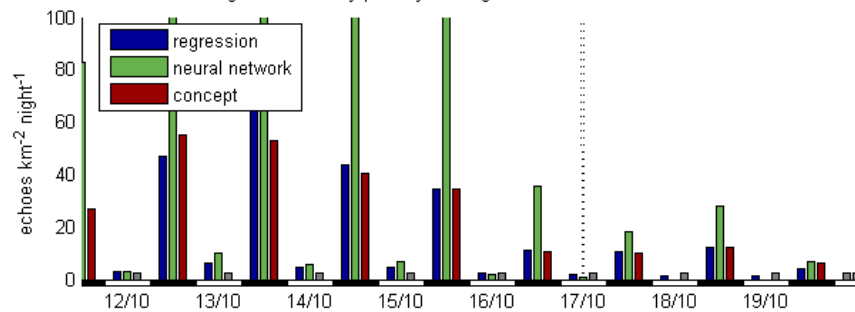
Welcome to the NL-BAM bird migration prediction module

Time series of meteorological variables (at the right) and nightly migration predictions (below) are presented. Meteorological forecast data (www.arl.noaa.gov/ready/cmet) is used as input for forecasting migration intensity up to 3 days ahead. Additionally, the warnings for estimated hourly birdrisks are shown. However, these are general trends and do not reflect the hourly weather changes.

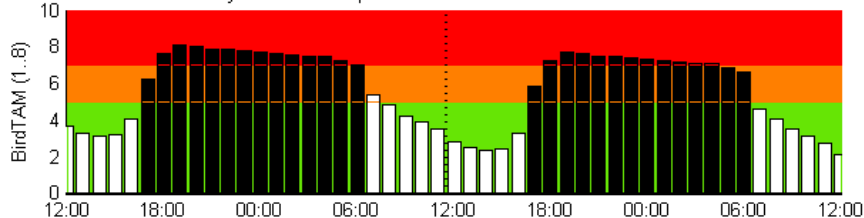
The most recent model forecasts are shown on this page. These may not always correspond with the current date (particular out of the migration seasons). For operational purposes model predictions are compared to real-time radar measurements.

The migration forecast presented here is based on 3 dynamic models that predict large-scale bird migration over the Netherlands. The models were based on local meteorological conditions and bird migration intensities, as measured by radar for many years. For information on model development see [Bouten et al. 2005](#).

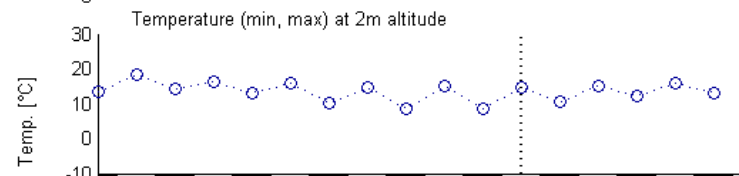
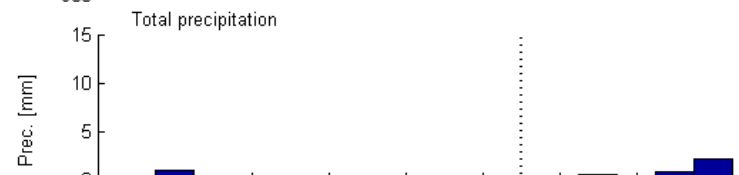
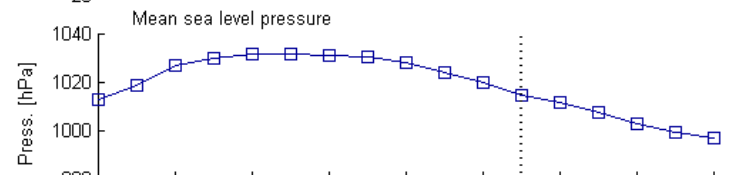
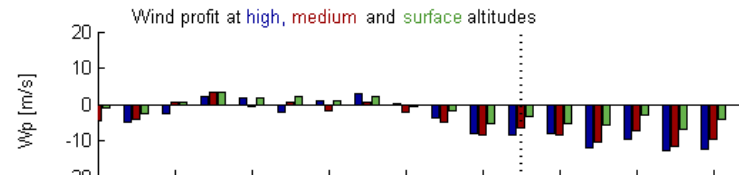
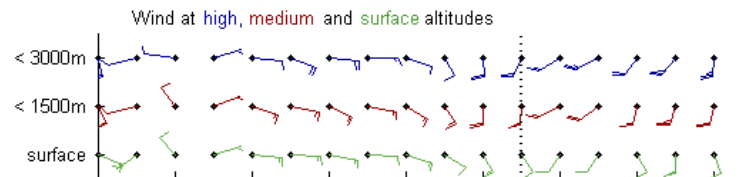
Predicted migration intensity per day and night in 2006



Standard hourly distribution of predicted intensities for 16/10-18/10



Last modified: Tuesday October 17 2006, 7:08 am





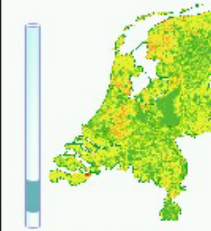


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Bird Avoidance Model

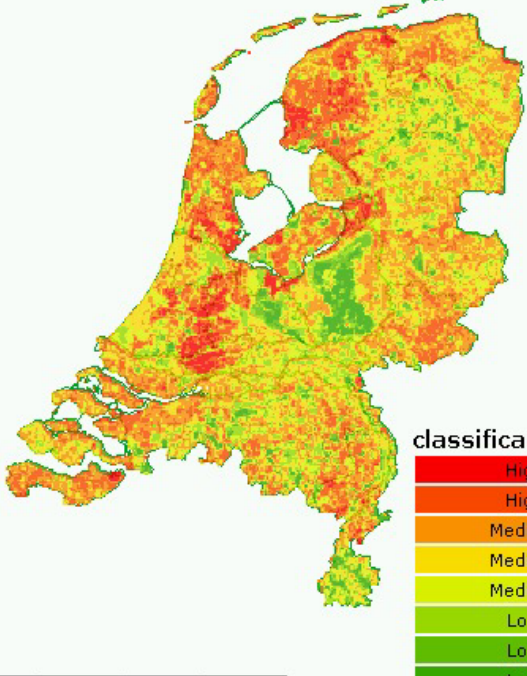
- First phase of BAM/BAS has ended.
 - Operational bird prediction model
 - Spatial bird distribution module

[home](#) - [spatial distribution](#) - [migration](#) - [spatial distribution \(authorized access only\)](#) - [about us](#)

Welcome to the NL-BAM spatial bird distribution module.
The maps show the combined aerial density of 62 bird species relevant for flight safety in the Netherlands in bi-weekly intervals, 4 time periods per day and at five altitude layers.
This model is based on historic data and represents the density distribution expected in average circumstances. Therefore, it is possible that the actual density in the field deviates from model predictions.

 1 - 30 m.	 30 - 100 m.	 100 - 300 m.
 300 - 1000 m.	 > 1000 m.	make your selections: Number of birds / km ³ <input type="text"/> 1st of Oct - 15th of Oct <input type="text"/> Dawn <input type="text"/>





classification:

High2
High1
Medium3
Medium2
Medium1
Low3
Low2
Low1

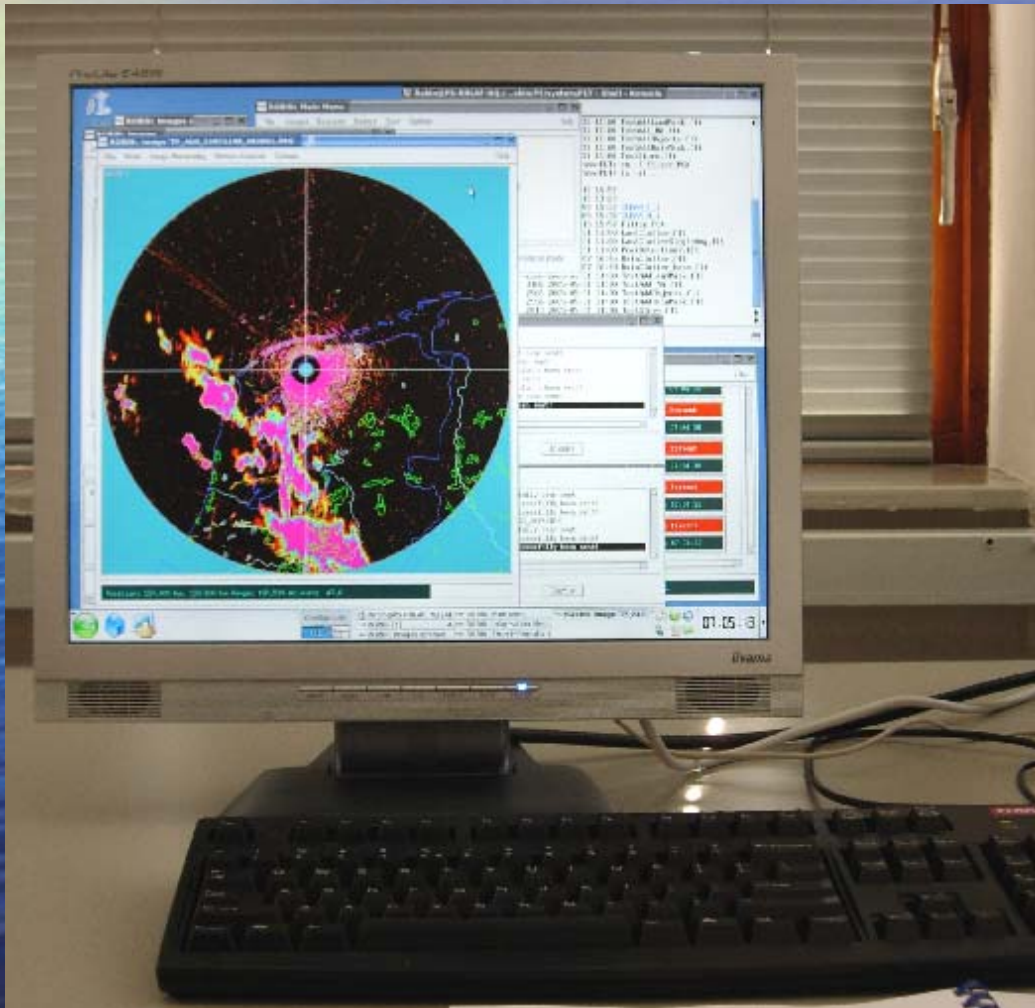
Bird Avoidance Model

- First phase of BAM/BAS has ended.
 - Operational bird prediction model
 - Spatial bird distribution module
- Future steps, to be discussed:
 - Up-grading current models
 - National Technology Program
 - Co-operation in ESA program

ROBIN4

- Complete new hardware redesign
- Improved reliability (98%) by doubling registration system per radar site
- Operational from home address:
 - Presentation system on desktop PC and laptop
 - Communication encrypted over secure internet
 - BIRDTAMs for night training
- Motion analysis on full 150km radar image

Robin4 hardware presentation (left) and registration system (right)



Range of the MPR radars equipped with ROBIN



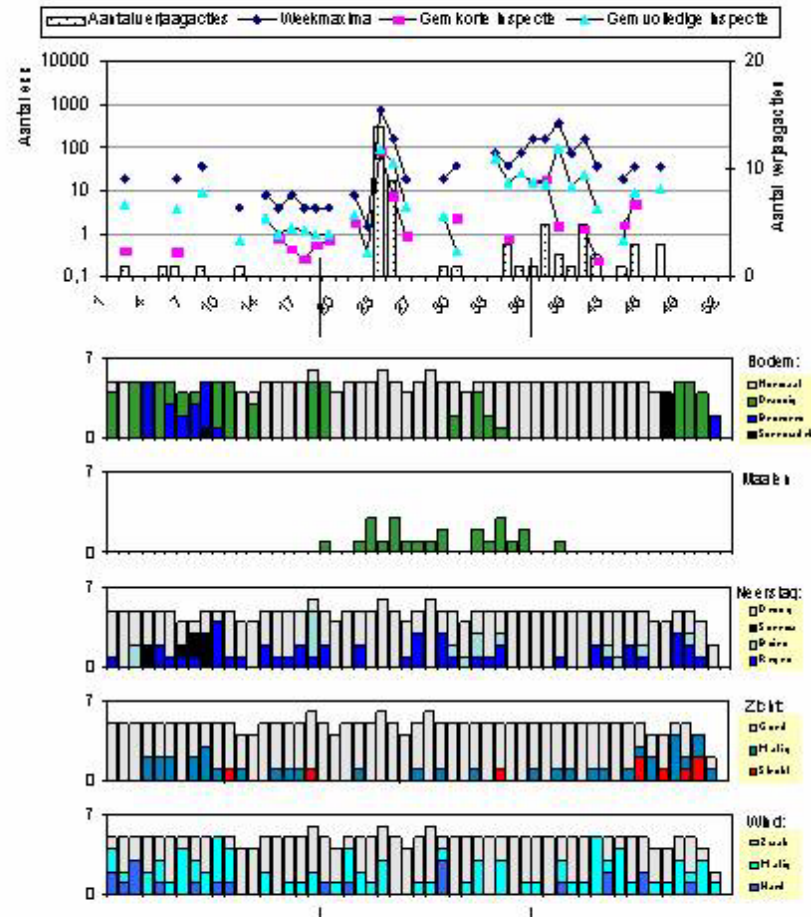
Airport Bird Information System

- Standardised bird counts per plot, 2-3 times per week (data since 1982)
- Daily logging of all relevant bird control topics, i.e. inspections, bird scaring actions, local bird status, habitat management (data since 2000)
- Data in ABIS, a new integrated web-based database. Accessible both for bird controllers and staff.

One of the many reports

Verjaagdruk, voorkomen van de Spreeuw en omstandigheden in 2005 op vliegbasis Twenthe

Inspecties uitgevoerd door alleen vogelaars, die zijn uitgevoerd in de
daglichtperiode (tussen 0:30 uur voor zonsopgang en 0:30 uur na zonsopgang)



De aantallen zijn berekend uit de bij de inspecties genoteerde klassen.
De verjaagdruk staat voor het aantal acties waarbij de betreffende
vogelsoort betrokken is geweest. De omstandigheden in het veld zijn
uitgedrukt in het aantal dagen waarop een situatie plaats had.



Looking forward to a fruitful
meeting!

And kind regards from Arie Dekker