

MIGRATLANE



Monitoring of flying fauna in the French Atlantic arc using radars

The **MIGRATLANE** program (2023-2027) aims at acquiring knowledge on avifauna in the French Atlantic arc (English Channel/Southern North Sea, Atlantic) in a context of interactions with human activities, especially as offshore wind farms projects are set to be largely developed in this area. Ornithological and weather radars are one of the methods used to monitor avifauna. These instruments can detect bird fluxes along and off the French Atlantic arc coastline and link them to weather conditions.

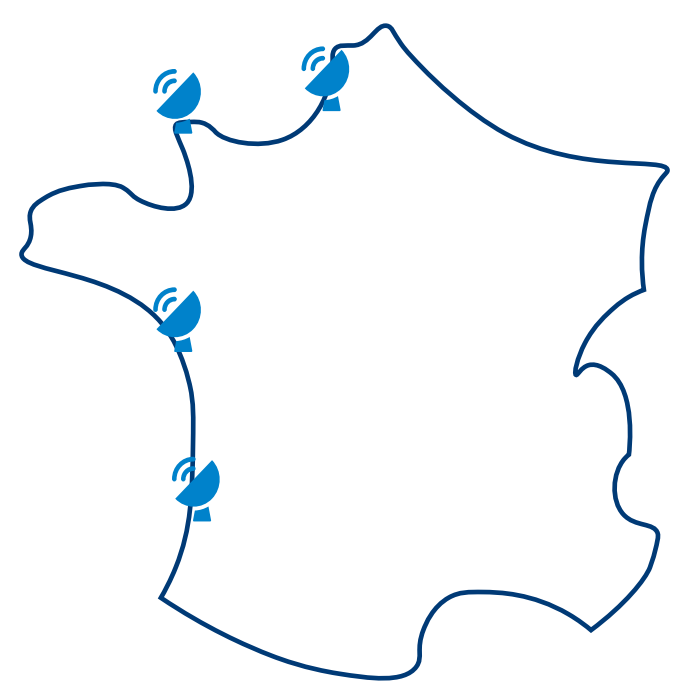
Two radar technologies used

Ornithological radar «BirdScan»



Fine spatial scale
(a few km radius)

4 coastal radars
(2 fixed and 2 mobile)



Allow fluxes classification into large fauna groups (insects, wetland birds, passerines, etc.)

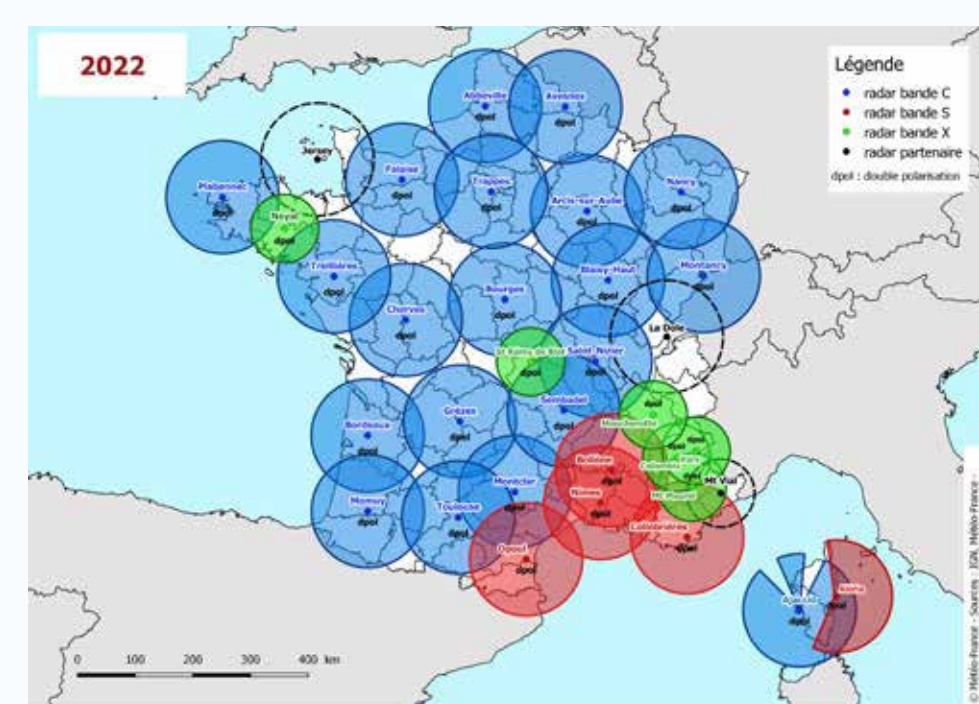
Inform on species groups, fluxes (number of birds/day/km) at fine scale, altitude, flying direction and speed

Weather radar



Large spatial scale
(35 km radius)

25 weather radars of the ARAMIS national network (Météo-France)



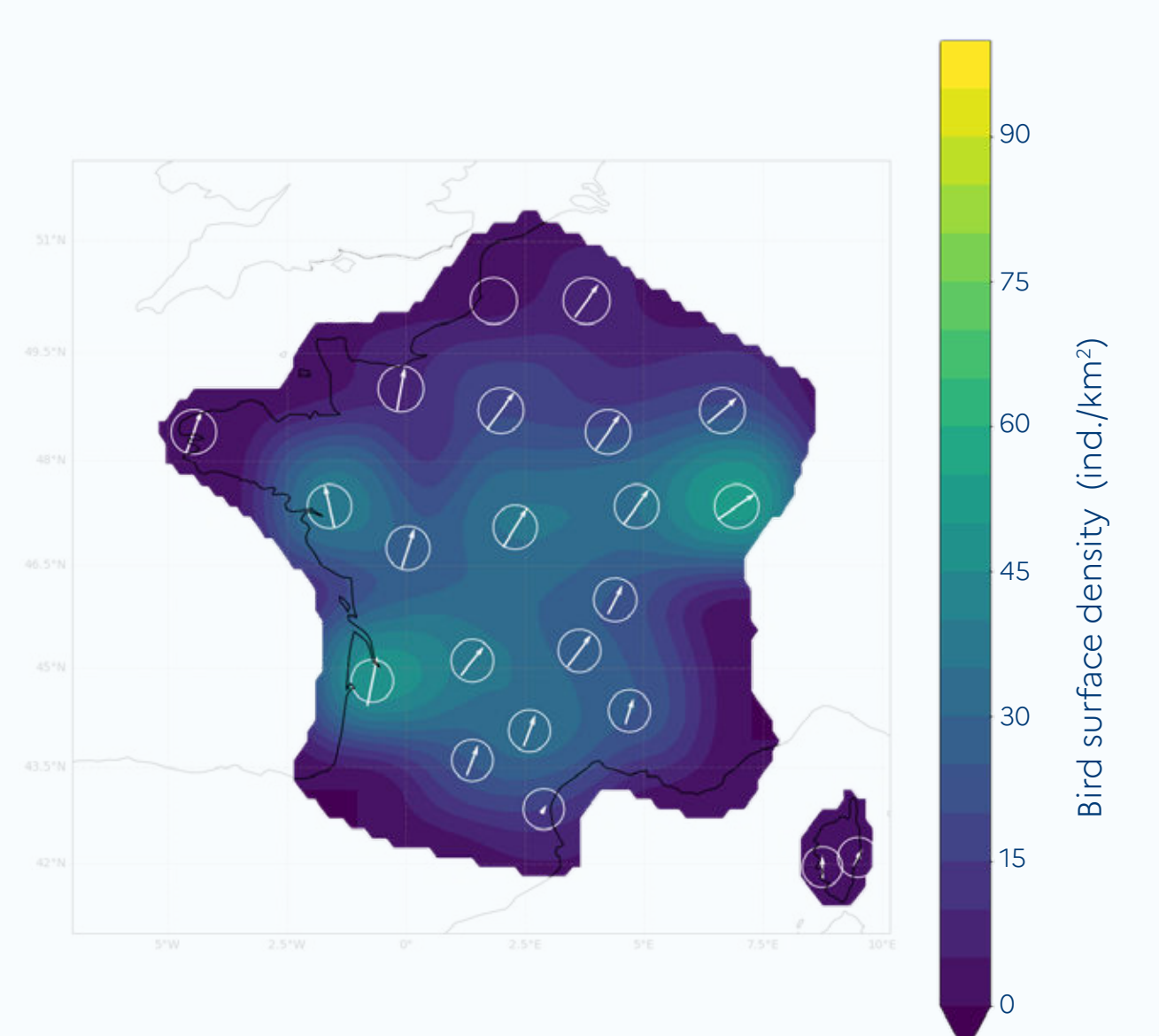
More difficult classification (R&D developments)

Inform on bird densities (large scale fluxes) and environmental conditions associated to fluxes detected

Did you know?

Weather radars are made to detect raindrops, but can also detect insects, birds and bats. That is a great advantage to quantify large scale land-bird fluxes! Used on specific targeted areas, **ornithological radars** enable to get more precise complementary information on bird fluxes.

Example of a map showing average bird densities estimated by weather radars



Expected results

- Fine scale data on migration fluxes (species groups, etc.) with ornithological radars
- Comparison of the data obtained from both technologies
- Development of algorithms to improve avifauna detection with weather radars
- Creation of an observatory of avifauna fluxes identified from weather radars
- Characterisation of bird fluxes on a large scale

