

BIRD-STRIKE CONVENTION BELGIUM
Lange Miskstraat 25
1970 - WEF 25/26/27-28/29/30/31/32

BSCE/10 WP/1

Tel.: Brussels 416.41.00 Ext.: 453
Telex.: BELBIR 41704

BSCE/10

A Belgian Birdstrike Risk Map based on numbers of birds
to the unit of area.

by J. Heirman, Centrum voor Bosbiologisch Onderzoek.

At a small meeting of the Bird Movement Working Group on 11/12th of december 1974 in Porz-Wahn, Belgian and German representatives agreed to draw up a simple European Birdstrike Risk Map with risk indications. This map should be based on objective criterions, to admit comparisons among countries.

3 types of risk were proposed :

Heavy risk area (hatched with red).

- > 100000 birds cat. A + B + C/ 1000 km²
- or > 50000 birds cat. B + C/ 1000 km²
- or > 25000 birds cat. C/ 1000 km²

Moderate risk area (hatched with green).

- > 60000 birds cat. A + B + C/ 1000 km²
- or > 30000 birds cat. B + C/ 1000 km²
- or > 15000 birds cat. C/ 1000 km²

Light risk area (hatched with blue).

- < 60000 birds cat. A + B + C/ 1000 km²
- or < 30000 birds cat. B + C/ 1000 km²
- or < 15000 birds cat. C/ 1000 km²

Birds of category A weigh 80 - 260 g,
" " " B " 261 - 1000 g,
" " " C " > 1000 g.

This paper reports about an attempt to make up such a map for Belgium.

1. Numbers of birds/1000 km² per province.

a. Basical data about bird populations.

We have at our disposition estimates per province, based on literature and counts, of the numbers of all regular breeders and winter visitors in Belgium (Lippens 1972). Actually the 'Koninklijk Belgisch Instituut voor Natuurwetenschappen' is working on a large-scale atlas project. This will be finished within 2 years and will furnish us a still more detailed information.

We judged homing pigeons should be included in the total bird population. The total number of registered homing pigeons in Belgium was 3.562.808 in 1972 (number of sold rings) ; at the end of the breeding period, there must be somewhat twice as much of them.

However, the estimated number of all other kinds of birds (> 80 g), breeding in Belgium, is 'only' 2.720.000 (x unknown factor at the end of the breeding period). This estimate may be too low, though proportions between different regions may be correct.

b. Conversion of bird numbers to the unit of area.

As a basis for comparison between the different regions, the estimated numbers of each species have been added up, and then converted in numbers of birds/1000km². Essentially terrestrial birds (e.g. galliformes) were excluded from the calculations.

Since smaller birds (cat. A & B) are the most common in our country, the highest classification was always obtained by additioning bird numbers of all weight categories. Breeding population is considered at the beginning of the breeding period; young are not taken into account. The procedure yielded the following list (see next page).

One can see that the relative differences between the provinces remain roughly the same, whether the homing pigeons are included or not. We therefore decided to include them, though, as a consequence, relative importance of homing pigeons may be exaggerated.

Number of birds/1000 km² per province, all categories (> 80 g).

Province	<u>Breeding population</u>		<u>Wintering population</u>	
	Homing pigeons not included	h.p. included	Homing pigeons not included	h.p. included
O.-VL.	100.613	367.059	38.279	304.725
ANTW.	158.810	433.513	47.398	322.101
LIM.	107.414	218.525	21.959	133.959
LUIK	67.355	106.064	12.324	51.033
LUX.(G.D.)	69.855	72.595	13.173	15.874
LUX.(prov.)	70.466	72.721	11.146	13.401
NAM.	70.524	87.531	13.292	30.399
HEN.	69.767	165.497	13.316	109.046
BRA.	91.736	294.423	21.155	223.842
W.-VL.	74.130	218.219	91.531	235.620

Wintering populations in general were estimated lower than breeding ones, except in West-Vlaanderen (coastal region), but here again, relative differences between the provinces remain roughly the same. The figures on the enclosed Map I are those of the breeding population, except for West-Vlaanderen (it was agreed upon one should always take the highest classification).

2. Adjustments making allowance for hydrological and geomorphological characteristics.

Belgium can be divided roughly in 2 entirely different landscapes. North of the rivers Meuse, Sambre and Vesdre are found the alluvial or sandy lowlands and the loamy plio-pleistocene slope, south of them are situated the woody uplands of the Ardennes, which support a population of less than 100 birds/km², as is obvious from Map I. The high densities in Antwerpen (453,5/km²) and Oost-Vlaanderen (367/km²) are in part due to the presence of a lot of bird-rich ponds in Antwerpen (prov.), partly also to the fertility of the alluvium of the scheldt. Densities here may be about 450 à 500/km², locally even more. The same holds for a narrow strip along the coast (West-Vlaanderen)

In the remaining part of the country one will find densities of about 200 à 300 birds/km². Based on this data, we drew up Map II. It was impossible to follow the proposed classification, because this would mean that 82,8 % of the Belgian territory would be heavy risk area. We therefore used the following provisional figures :

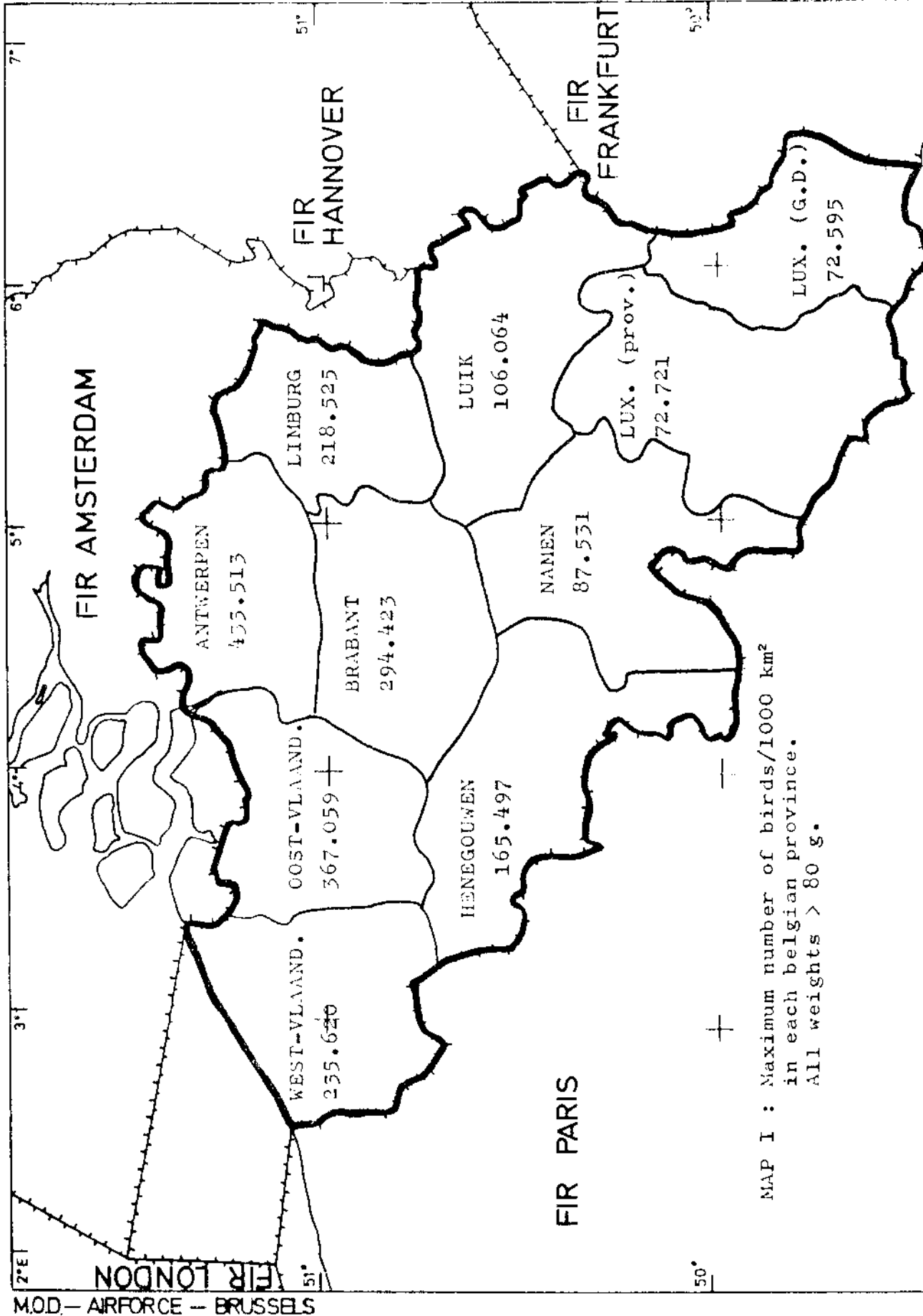
Heavy risk	:	> 350 birds/km ²	(all categories)
Moderate risk	:	100 - 350 birds/km ²	(")
Light risk	:	< 100 birds/km ²	(")

At least for Belgium, it would be possible to establish a more precise classification by using other colours, as usual in meteo. If the same could be done in other countries, a more useful map would be the result.

3. Small high risk areas.

It was agreed that smaller areas with an exceedingly high birdstrike risk should be indicated on the map as red spots, and important bird conservation areas as red rings. Since this is not a major problem, they have been omitted here, for the sake of simplicity.

AIP MILITARY BELGIUM



MAP I : Maximum number of birds/1000 km² in each belgian province. All weights > 80 g.

