## POPULATION DENSITY BY STATISTICAL SECTOR

1. The large map shows population density by statistical sector. Until 1970 mapping could only be made by communes. Statistical sectors make possible a much more precise way of presenting the distribution pattern. Not only because this concentration on settlement was an element used to the delimit the statistical sectors but also because statistical sectors result in a more detailed division of the Belgian land area (in 1997 there were 19 412 sectors, i.e. 33 times the number of communes: 589). Statistical sectors were first used for population distributions at the time of the census of 1970 (H. Van der Haegen & Th. Brulard, 1973). This distribution was further refined in the following censuses of 1981 and 1981 (I.N.S., 1998). The delimitation of statistical sectors was made by geographers, starting from a delimitation into districts (neighbourhoods based on local needs). In rural and in urban zones there was generally a correspondence with the old villages and their surroundings, which mostly until 1977 coincided with the limits of the communes. In the towns, the existing units or structures formed the basis for the distribution into districts.

These districts were first subdivided on the basis of the density of settlement. On the one hand a distinction was made where there is a nucleated settlement with continuous features and on the other hand a more or less dispersed settlement or an uninhabited area (e.g. woodland ... ) in a zone served by the central nucleus. 3839 such settlements can be distinguished in Belgium. In order of size these are distributed as follows: less than 200 inhabitants 1125, from 200 to 499 inhabitants 1097, from 500 to 999, 654, from 1000 to 1999, 436, from 2000 to 4999, 3000 and more than 5000 inhabitants 227. Settlements large enough to be so differentiated have been subdivided on the basis of homogeneous criteria such as age, building styles and social status. In the end this gives a total of 19 412 statistical sectors for all of Belgium.

The table gives an outline of the number, the population, and the area of the statistical sectors according to density classes shown on the map. The table illustrates the unequal distribution so presented: the first two classes (20.9% of the sectors) comprise 55.7% of the area with only 2.3% of the population, whilst the last two classes (20.8% of the sectors) comprise 49,2% of the population with only 3.9% of the area.

The density classes that are used do not only emphasize these very marked contrasts, but they also allow, within a limited colour range and limitations of legibility, differentiation within the rural areas (including woodlands, heathlands, etc.), as well as the different densities within the urban areas. The map shows the contrast between the population densities of the settlements and the surrounding rural environment (including woods, heaths, etc.). The map is particularly rich in contrasts in the zone south of the Sambre-Meuse trough, as well as in the limon zone (especially Hesbaye) and the Polders, where there remain many small old settlements of less than 200 inhabitants. Elsewhere, especially in the north of the country, the contrast also exists, but is less pronounced. On the one hand, the settlements are less compact, but are larger and in many cases show tentacles along the roads; on the other hand, population density of the country sectors is again much higher than in Hesbaye because of the strongly dispersed settlement. This dispersed pattern partly reflects the Middle Ages as in interior Flanders, but it has above all been well developed since the 19th century and this movement has accelerated during the present century. The tendency to live more spaciously, and where the land is cheaper outside the towns and villages has become a general one in Belgium. For physical, historical and demographic reasons, the dispersed pattern has developed more strongly in the north than in the south of the country, but it is present to a greater or lesser extent around the large towns.

2. In making a regional analysis (west to east, and north to south) the contrast is impressive in the polders of Western Flanders and the extreme north of Eastern Flanders with small settlements and sparsely peopled zones of dispersed farms between them (20 to 50 inhabitants/km<sup>2</sup> and now and then less than 20). The narrow coastal belt is marked with its high concentration of population and it is only interrupted in some places by the dunes (for example De Panne and Zoute-Knokke).

Interior Flanders clearly shows settlements much larger than those of the polders with important tentacles along the roads. The countryside environment with a traditional dispersed pattern has densities between 50 and 100 inhabitants/km2. In a southerly direction the settlement evolves again to a denser pattern in the triangle Roeselare-Deinze-Mouscron - the industrial zone of Kortrijk at its centre - with some large settlements and a strong mix of industry and population.

The zone of high population density in the centre of Belgium extends broadly between Gent-Oudenaarde-Geraardsbergen-Tubize-Braine-l'Alleud-Wavre-Leuven-Aarschot-Antwerpen-St.-Niklaas and Lokeren. This zone is characten'zed by an accumulation of settlements whose density mostly approaches a thousand, whilst rural densities exceed 100 inhabitants/km<sup>2</sup>. This zone is the prime commuter residential region for Brussels. The few green spaces which occur here and there are features such as nature reserves. On the map the most distinctive feature of this kind is the Forest of Soignes between Brussels and Waterloo-Braine-l'Alleud.

To the east, from the Hageland and the southern Campine as far as the wet Hesbaye, some densities similar to those of the central zone do appear, yet there are fewer important settlements and the dispersed pattern reaches lower figures.

To the north as well as to the east whilst there are still some important areas of less than 50 inhabitants/km<sup>2</sup> there are nearby large settlements which coincide with the old mining centres and/or local industrial developments. In particular one can clearly see the low population of the western edge (less than 20 inhabitants/km<sup>2</sup>) of the Campine plateau. On the other hand, the valley of the Meuse is characterized by numerous settlements and higher densities.

In Wallonia the old industrial axis of the former mining basin can be well seen by virtue of its important population nodes and by their suburbanisation. For the rest, the dispersed type is very uniform, characterized by low densities (most of the time less than 20 inhabitants/km<sup>2</sup>). Here, small historic rural village settlements can be distinguished (close on nine hundred have less than 200 inhabitants and a good seven hundred from 200 to 500).

Again, a number of regional characteristics come out, as for example, the Tournai region, recognizable by a vast zone of more dispersed habitation and a larger number of more important small settlements. Communication axes which link Brussels to Mons, Charleroi (including the line of the canal), the same with the axis of the Dyle to the south of Wavre and the rail links towards Namur are marked by higher densities. To the south and to the east of Liège along the Ambleve, the Vesdre and the Ourthe, the density is stronger and continues one way towards the Verviers region and the other way into the Pays de Herve. This last has been characterized since the 17th century by a dispersed rural population. Towards the east the line carries on via Eupen to the suburban surroundings of Aix-la-Chapelle which have stretched into Belgium.

In Highland Belgium, a detailed analysis of the map shows a higher population density on the calcareous band that extends from Chimay to Marche-en-Famenne, at the foot of the Ardennes, as well as in the S.W. - N.E. structures of Condroz. The map also shows up Belgian Lorraine, with its W-E village alignments.

3. The inset map showing population density by commune allows comparisons to be made with earlier maps (first and second atlases) and provides additional interest to the present map by statistical sectors. The map gives a global view of the population distribution in Belgium. Two large zones of high density are recognizable: there is the one named the "Vlaamse Ruit" (Flemish Lozenge, the polygon Ghent-Antwerp-Louvain-Brussels) with its well marked tentacles in the direction of Courtrai to the west and to the east to the Campine and the Walloon axis of Tournai, Mons, Charleroi, Namur, Liège as far as Verviers and Eupen. These two zones of high density are separated by the limon zone from Hainaut to Hesbaye, still more or less rural with a less marked population density. To the south of the Walloon axis lies Highland Belgium, relatively thinly populated, but limited in the south by another region of higher population density, Belgian Lorraine.

4. The inset map which shows the mean annual increase in population from 1991 to 1997 confirms the decrease in population of the larger towns. This corresponds to the continuing extension of suburbanisation. This feature is clearly shown round about Brussels (especially in Walloon Brabant, Antwerpen, Liège, but less applicable to Charleroi, Gent, Namur, Leuven, Brugge, Aix-la-Chapelle and Luxembourg (Arlon and environs). Population increase is also very pronounced along the coast, to the north of the Campine, but more dispersed in the Ardenne. Nevertheless, a reduction in population is shown in the south west of Western Flanders, the west of Hainaut and also in the western Ardenne.

Number, population and area of statistical sectors, 1997						
Pop./km <sup>2</sup>	number		population		Area	
	Figs.	%	Figs.	%	km <sup>2</sup>	%
<=20	2765	14,2	73880	0,7	12137,53	39,7
20-49	1289	6,6	163488	1,6	4885,66	16,0
50-99	1326	6,8	312191	3,1	4401,38	14,4
100-199	1370	7,1	428455	4,2	3095,82	10,1
200-499	1836	9,5	496783	4,9	1582,38	5,2
500-999	3062	15,8	1101788	10,9	1481,36	4,8
1000-1999	3807	19,6	2559230	25,3	1801,79	5,9
2000-4999	2669	13,7	2786658	27,5	943,17	3,1
>=5000	1288	6,6	2195334	21,7	250,87	0,8
Total	194121	100,0	10117807	100,0	30579,96	100,0