LAND COVER

The atlas plate IX.2 is a land cover survey that has been made within the frame of the CORINE programme of the European Commission (CORINE = COoRdination des INformations de l'Environnement). The aim of that programme is to encourage and co-ordinate the attempts to compile information on the state of the environment and natural resources in the European Union, in order to allow a better management of the environment. The compiled data are stored in a geographic information system using the land cover as a map reference layer.

The Belgian part of the CORINE land cover project has been carried out by the Belgian Institut Géographique National (IGN). It is based on aerial photographs and satellite data, essentially four scenes recorded in 1989 and 1990 by the Thematic Mapper of the LANDSAT satellite. After a detailed multisource data interpretation combining those documents with ancillary documents, the territory has been divided into unit areas with well-defined spectral and morphological characteristics. Each unit area to be mapped should durably correspond to an item of the CORINE land cover nomenclature. The smallest mapping unit area is 25 ha with a minimum width of 100 m. These generalization criteria have been defined for the working scale 1:100 000 and have been completed with rules for combining non-significant unit areas with the surrounding areas.

If these criteria had been strictly applied to Belgium, the discontinuous built-up area, in particular the ribbon development along roads, would have been largely underestimated. In order to reproduce this characteristic feature of numerous regions accurately, the area of the smallest mapping unit has been reduced to 10 ha and the minimum width to 50 m. Moreover, the built-up areas that are less than 300 m apart along a road have been put together. So, most built-up areas could be mapped. Only the absolute spreading of the built-up area is not reproduced.

The whole national territory has been divided into more than 30 000 unit areas, that have been mapped according to a legend containing 22 items. Some watercourses, main roads and a few names of cities have been added.

Land cover essentially concerns the nature of the features occupying the land surface. In some cases, however, the socio-economic function of the mapping units has been taken into account, because of its importance for the management of the environment. For instance, among the areas covered with a characteristic association of large buildings and warehouses, a distinction has been made between industrial, commercial or service areas and port areas. On the other hand, the items «construction site» and «transitional woodland» show the dynamic aspect of the land cover.

On the atlas plate IX.2 we can distinguish numerous entities of the country's regional division (cf. page 50 of the 1st ATLAS of BELGIUM). In this short commentary, it is however impossible to review all those entities in detail. So, we will merely make a few remarks.

First of all, we are struck by the fact that the urbanized area is strongly emphasized on this map. We are able to localize even the smallest urban areas. Suburbs, thousands of other built-up areas and extensions of built-up areas along roads are also mapped. This image of the built-up area in Belgium can be analysed globally or in detail.

In a first approach, we note some major regional disparities in the degree of urbanization. Beside the urban and industrial centres, the areas situated near cities at the centre of the country, in the Sambre and Meuse valley and along the coast are also very urbanized.

In a second approach, the urban structure can be interpreted in terms of size and, to a lesser extent, in terms of shape of its nuclei. In this respect, the perfectly organized network of medium-sized or large built-up areas covering the major part of inland Flanders sharply contrasts with the small built-up areas south of the Sambre and Meuse valley. There are, however, two exceptions: the polders that are characterized by a mainly scattered habitat and the region between the rivers Vesdre and Meuse that is characterized by a scattered habitat associated with villages and more recent extensions along the road network. In the latter region, the built-up area has been overestimated because of the generalization thresholds.

The distribution of the remaining urbanized areas requires some comment. The association of industrial areas with port areas, navigable waterways and valley floors is very apparent. The extractive industry, which dominated the activity in the Campine not so long ago, has marked the landscape in that region. Indeed, we find there a combination of industries, mineral extraction sites and artificial water levels. In the class «industrial, commercial or service areas» we find all areas that are characterized by large constructions and associated artificial surfaces such as car parks, storage yards or settling tanks. This class therefore contains miscellaneous features such as the heavy industry, office districts and some military domains. The green urban areas and the sports and leisure facilities also show up various features.

Agricultural areas take up the major part of the land. They are divided into three basic classes and two mixed ones : the mixed agricultural areas and the agricultural areas associated with semi-natural areas. In Belgium, the mixed agricultural areas consist of cultivated parcels, meadows and sometimes also orchards that are inseparably linked together according to the criteria of the CORINE land cover project. This class is largely represented in sandy and sandy-limon regions. It is also quite frequent in the middle of the Ardennes region and around villages all over the country. The agricultural areas associated with semi-natural areas are parcels of land that are sporadically covered with thickets, wetlands or lakes that are too small to be mapped separately. Several valley floors planted here and there with poplars also belong to this class.

Outside these mixed areas, and contrary to atlas plate IX.1, the morphology of the parcels has been wiped out in favour of the prevailing agricultural land cover : mainly arable land and meadows. In Belgium, there are few regions where large areas are fully covered with orchards. Such areas are concentrated in the region between the rivers Vesdre and Meuse, in the sandy-limon Hesbaye and in the Hageland east of Aarschot and Tienen.

The other large land cover classes are rather residual areas. Forests can be found everywhere in the south of Wallonia, but also in the Campine and on some heights. The Campine is the country's region whose land cover is most diversified, because pine forests are associated with heath and with urbanized areas. Other moors and undergrowth (for instance at Elsenborn, Marche-en-Famenne or in big towns) stress the presence of military drill-grounds or of former industrial or extractive sites that are covered with vegetation. The fixed coastal or continental dunes have been mapped according to their plant cover and are classified as woods or as moors and undergrowth. Wetlands are a marginal class in Belgium, all the more because those planted with trees have been classified as forests, according to the criteria of the land cover project. Peatbogs have been mapped according to the soil map data.

A more detailed analysis of this document reveals some local peculiarities such as the preferential geological orientation of the land cover in the Condroz; the old fortresses surrounding the city of Antwerp, most of which have been converted into recreation areas; the rich agricultural plateau du Gerny between Marche-en-Famenne and Rochefort; the ribbon development of villages especially in the Meetjesland.

On the other hand, some major landscape features have been disregarded in this generalized approach of the land cover. For instance, all line features such as hedges and dikes are absent from the CORINE data, because only surfaces are taken into account. However, a drainage system in the Polders has been included into the document in order to set off that region against the surrounding regions.