The Third National Atlas of Belgium

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From 1950 till 1972 the “Permanent Commission of the National Atlas of Belgium”, a part of the National Committee of Geography, published 65 sheets of the National Atlas of Belgium. Between 1976 and 1999 different maps of the Second National Atlas of Belgium were produced by the same commission. Due to the low publication rate and the inherent obsolescence, the success decreased in the last decennium.

As a result of the General Socio-Economic Survey of 2001, the Third National Atlas of Belgium is in preparation, under impulse and funding of the Belgian Federal Science Policy Office. The new edition does no longer contain separate thematic sheets, but is composed of six volumes related mainly to socio-economic topics. The different volumes, each of about 80 to 140 pages and including at least 50 % of maps, are: (1) Political and electoral geography; (2) Landscape, countryside and agriculture; (3) Towns; (4) Habitation; (5) Economic activities; (6) Population.

The First Belgian National Atlas

History and realization

Before the Second World War, thematic atlases in Belgium mainly consisted of a scant supply of student atlases and general geographic works. An important initiative to encourage more scientific maps was associated with the law of 1929, which also made geography a university subject. In 1937, the Professors Hegenscheidt from Brussels and Michotte and Lefèvre from Leuven presented a fully detailed plan for a first national atlas to the ‘National Committee for Geografía’, which fell under the auspices of the Royal Academy of Belgium. This plan for the creation of some fifty map sheets was approved in 1939. However, the Second World War brought a halt to all these activities for a number of years.

Work proceeded again immediately after the Second World War in the form of the ‘Commission permanente pour l’atlas de la Belgique, Permanente Commissie voor de Atlas van België’ that was founded by the National Committee. The Royal Academy became the patron of realisation, and the Ministry of Public Education granted an annual subsidy. The scientific contribution to the Atlas came from staff from all the geographic institutes at Belgian universities, and from numerous other scientific bodies. The then Military Geographical Institute, later the National Geographical Institute, took responsibility for the inscription and printing of the map sheets.

The 65 large map sheets, which together contained 286 maps and numerous graphs and profiles, saw the light of day between 1950 and 1972. The standard scale for the main maps was 1:500 000. Smaller-scale maps of 1:1,000,000 or 1:2,000,000 were used if necessary. The map sheets were separately available in atlas form or adhered to strips to bring them together in a prestigious binder with a metal closing system. The key and title were always provided in two languages on all map sheets. A very short explanatory text in French and Dutch was printed on the reverse of each map sheet. Each map sheet was also accompanied by a brochure (separately in French and in Dutch) in quarto format containing a detailed account. Besides text, these brochures also contained sketches, graphs, profiles, tables and a
bibliography. The map sheets and comments therefore together represented a fairly complete and thorough scientific study of the various geographic aspects of Belgium.

The Atlas was circulated in a number of editions. It was sent to the geographic departments of universities at home and abroad, scientific bodies, schools, private persons, and also embassies and companies who could present their foreign guests with maps of Belgium. Of the total sales (113,000 map sheets) 21% was destined for abroad. Besides a scientific role, the first National Atlas therefore also played a de facto diplomatic role.

**Content**

From the content it appears that the First Atlas had a traditional layout with consecutive map sheets of Belgium in Europe, cartography and geophysics, biogeography, physical, human and economic geography, and finally regional geography with the regional arrangement of Belgium complemented by examples of maps of different geographic areas. Because of its publication period, the economic geography is particularly aimed at agriculture, industry and traffic. With the exception of a tourism map the tertiary sector is not done justice. Human geography is also limited to the demographic basic indicators and network of towns and cities. More social indicators of the population (such as unemployment, criminality, etc.) were only to be covered in the second atlas. The Atlas is clearly a child of its time, but because its realisation took place over some 22 years, the map sheets do nevertheless show signs of current geographic and cartographic evolutions. Some mapped subjects such as gravity, terrestrial magnetism and seismology are not nowadays included among the basic concerns of geographers. Many maps reflect a synthesis of many years of research, such as the map sheets concerning relief, geology and soil associations. Yet, conversely there are very many map sheets created on the basis of census information, so relating to one point in time. With the population information particular attention was also devoted to the long-term evolution of population density, births and deaths (from 1880).

*Fig. 1. Example of a sheet of the First National Atlas of Belgium: sheet 7*
THE SECOND ATLAS OF BELGIUM

Why a second atlas?

The first national atlas was completed in 1972. The initiative for the second National Atlas already came in 1966, so even before the first one had been completed. The draft was ready in 1972, and the first maps were printed in 1976. The Commission was of the opinion that in a time when increasing attention was being paid to the improvement of standards of living and the environment, thorough scientific knowledge of the various Lebensraum was indispensable. It was attempted to use a coordinated cartographic policy. To this end, consultation took place with related bodies such as the National Office for Statistics, the National Geographic Institute, town and country planning departments, the Regions, etc., in order to concretise cooperation and avoid double use.

Hindrances with realisation

Regional sensitivities have greatly increased in all countries of Western Europe. The European Union and other supranational organisations are, unfortunately, increasingly having to cope with regional disparities concerning economic potential, language, culture and religion, and in our country particularly the politics of the regions and communities. In such circumstances a national atlas meets opposition, and regional and local atlases appear on the market.

The content of the national atlas is also tweaked by map productions of some scientific bodies. Larger-scale national or regional map series such as topographical maps, soil maps, geological maps and biological maps give more detailed information than the synthesis map that the atlas is. On the other hand, computer cartography quickly and less expensively enables the visualising of basic characteristics of the population, accommodation, agriculture and land use in an up-to-date form. Since the eighties the National Office for Statistics has regularly published maps based on their census information and other statistical material. Although these maps show Belgium in A4 format or smaller and are barely attractive from a cartographic perspective, because of their up-to-date nature they are indeed worthwhile. There was, however, no comparison with the high quality cartography of the Second Atlas.

Because the content of the maps was supplied by voluntary and unpaid staff, and because of the tedious pre-press and high printing costs, the realisation of the Second National Atlas could not be financed in the short term with the limited ministerial subsidy and falling sales. Realisation therefore had to take place spread over a number of years.

The content

The Second Atlas project provided for no less than 94 map sheets, which usually contained complex thematic maps and maps with geographic synthesis. The main sections are practically the same as in the First Atlas. Physical geography, demography and economic geography are covered again, but there are also maps on new problem areas which received little attention in the First Atlas, such as the tertiary sector, the environment with nature parks, quality of the surface water, organisation of the space, unemployment, incomes, satellite images, etc. Because of the non-completion of the atlas, the intended balance and wide range of subjects was ultimately not achieved. The comments per map sheet were no longer printed in a separate brochure, but are more concise and now appear on the reverse of each map sheet in four long columns in four languages, being Dutch, French, English and German.

The second atlas remained incomplete

Although the first map sheet for the Second National Atlas appeared in 1976, by the end of 1999 there were only 34 map sheets ready, meaning barely one-third of that intended. The conviction grew in the Commission that this state of affairs could not be allowed to continue because
- recent years have seen such a deluge of innovations and technologies that a traditional bulky atlas in a large format was no longer worthwhile, and certainly not in editions spread over a large number of years;
- sales to universities, colleges of higher education, secondary educational establishments, libraries, organisations and private persons had fallen very significantly;
- the long pre-press and printing times meant much information had already become obsolete by the time the map sheets were published;
- in the meantime, many universities and institutions had obtained their own cartographic computer facilities so they could themselves spread much information quickly and inexpensively.
THE THIRD ATLAS OF BELGIUM

The origin

The Third Atlas of Belgium originated after the ‘General social-economic survey’ of 2001, the continuation of the previous censuses. The atlas was produced under a Federal Scientific Policy programme. As a result, financial resources were created and the different university teams who worked on the six parts of the atlas were subsidised. The ATLAS programme under Federal Scientific Policy enables the six parts of the atlas to be published between 2005 and 2007, so a consistent and updated geographic and social overview of Belgium can be provided.

The coordination and subsidies being provided under Federal Scientific Policy is no coincidence. On the occasion of the population census of 1991, an extensive programme had already been developed to use different studies to explain the results of the different aspects of the population census. A summary of these results was published in an atlas called ‘België ruimtelijk doorgelicht/La Belgique, diversité territoriale’. This 144-page publication contains 128 maps on a scale of approximately 1:2,000,000 (A8 format). Although this mainly concerns simple, usually choropleth maps, it comprises an overview of various socio-economic aspects of Belgium at municipality level for the year 1991, where each map is accompanied by comments of approximately half an A4-format page. Because not all fields are covered however, and the detail is sometimes limited because of the modest volume and because the evolutionary context is limited, this publication is not regarded as a ‘National Atlas’. It is, however, an important intermediary stage in the origination process of the 3rd Atlas. Its major success was indeed an initiative to continue. This was an ideal time for the ‘Commission permanente pour l’atlas de la Belgique, Permanent Commissie voor de Atlas van België’ to start making plans in conjunction with Federal Scientific Policy. In geographic circles there was indeed the conviction that a permanent need existed for carefully produced and scientifically founded cartographic publications.
Content and realisation

The design thoroughly differs from the first and second atlas, and follows the developments of national atlases abroad, being publication in volumes that for each subject form a consistent whole with maps in a handy format, accompanied by comprehensive explanatory texts, along with graphs, figures and statistics.

Because the Third Atlas originated further to the “General social-economic survey” of 2001, it is no wonder that the subjects are mainly social-economic. However, the subjects do cover a much wider field than that of the social-economic survey because other databases were also used, and much attention was devoted to evolutionary patterns so very many older databases were involved with the research and cartography. The atlas parts were produced by teams at different Belgian universities. A separate team of cartographers (led by Ph.De Maeyer, UGent and J.P. Donnay, ULg) will ensure the required homogeneity in the cartography throughout the atlas.

The six parts are:

1. Political and electoral geography, Chr.Vandermotten (ULB), Chr.Kesteloot (KULeuven) and P.Saey (Ugent),
2. Landscape, countryside and agriculture, E.Van Hecke (KULeuven), M.Antrop (Ugent), S.Schmitz (ULg),
3. Cities, J.-M.Decroly (ULB), Chr.Kesteloot (Kuleuven), E.Wolff (ULB),
4. Habitat, I.Thomas (UCL), D.Vanneste (KULeuven), L.Goossens (UA),
5. Economic activities, B.Mérence-Schoumaker (Ulg), A.Verhetsel (UA), J.-M.Decroly (ULB), Chr.Vandermotten (ULB),

Part 1 has a strongly historical character because the evolutionary nature of the current Belgian structure and town and country planning politics were explored. Because there is no separate part about the physical environment, it was decided to include maps with geographic synthesis of the geological and soil map of Belgium from the Second Atlas in Part 2. These maps are indeed important for interpreting the maps as regards landscape and agriculture. In the part on economic activities databases are also used from outside the National Office for Statistics. Also used here is information about employment from the national departments for social security, and information from different traffic administrations and companies for the transport part. Databases other than those of the National Office for Statistics can also be used in other atlas parts.

In principle, the smallest town and country planning entity used is the municipality. There are 589 municipalities in Belgium, so this results in readable yet quite precise town and country planning information. A smaller scale is appropriate for studying internal differentiation within the urban centres. The statistical neighbourhood is used for this purpose. This entailed Belgium being divided up into approximately 20,000 town and country planning statistical census units, with a detailed study as a result. In the atlas parts on towns, living and the population the most important urban centres are accordingly studied on this scale.

A small presentation volume (“volume0”) will be broadly distributed in 2005, and gives an historical overview of Belgian atlases (specially the Belgian National Atlases), as well as an introduction to principles of data processing and visualisation and an introduction to the six volumes of the Third Atlas.

The atlas is to be published in landscape format measuring 33 cm by 27 cm to allow Belgium to be represented on a scale of 1:1,000,000. For simple choropleth maps a scale of 1:2,000,000 is sufficient, so four maps can be shown on one page. The first four parts will comprise approximately 80 pages, and parts 5 and 6 approximately 140 pages. Some half of each volume is devoted to maps, the other half to text and illustrations.

Web-atlas

The paper atlas will, however, also be subject to obsolescence. Nevertheless it will, like the previous editions, form a historic testimony to the geographic inventory and synthesis. The more detailed texts and associated graphs and tables will also be a permanent source of inspiration for new research. To stimulate this new research, however, scientists, policy-makers, students and the general public must be able to quickly analyse and visualise the most recent information. This is why the realisation of a Web atlas has also been considered, as is the case in other countries. This must involve more than the digital presentation of the paper edition in the form of an electronic atlas. The intention is to develop a tool where thanks to the availability of regularly updated federal databases up-to-date maps can be provided, and where the user is offered facilities to interactively query data. It is the intention to have the necessary experiments involving the linking of data and the interactive querying of the information from government databases completed by the end of 2006, to then be able to submit a proposal to the government concerning an operational national web-atlas.
BIOGRAPHY PRESENTING AUTHOR

DE MAEYER Philippe A.M. - born April 15th, 1955
Full-time senior lecturer in cartography and GIS at Ghent University

Diplomas:
- Master in Sciences, Geography, 1976, Ghent University
- Certificate in Applied Geophysics, 1977, Bordeaux University
- Postgraduate Diploma of Marine Geology, 1977, Bordeaux University
- Doctorate degree in Marine Geology, recognised as PhD Sciences, 1980, Bordeaux University
- Teaching certificate (Aggrégation de l’Enseignement Sec. Sup.), 1986, Ghent University
- Postgraduate Certificate in Business Economy, 1992, IPO (Antwerp University)
- separate certificates in Informatics

Career:
- Postgraduate student (Boursier du Gouvernement Français), Bordeaux University (France), 1976-78
- Assistant, Laboratory of Physical Geography and Regional Soil Sciences, Ghent University (Belgium), 1978-81
- Lecturer Applied Geophysics, University of Constantine (Algeria), AGCD, 1981-85
- Lecturer AGCD, University of Gent, 1985-87
- Manager dep. ‘Cartography and Digital Media’ and member of the direction, Photogravure De Schutter, 1987-99
- Visiting professor cartography Katholieke Universiteit Leuven (Leuven Catholic University), 2000-2001
- FT Lecturer Cartography, Ghent University of Gent, since 1999
- member of the Faculty Board, president of the Education Commission Geography-Surveying, member of the Bureau of Education Quality

Research topics
- methodology on production process,
- spatio-temporal models and standardisation in GIS,
- mapping techniques involving high-resolution remote sensing data,
- GIS applications in medical urgencies,
- mapmaking in the 19th century
Staff involved about 14 FT persons (assistants, FWO-research council, project researchers,…).

Membership
- GIN Geo-informatie Nederland, (active member and member of the editing board)
- Comité Français de Cartographie
- Flagis
- British Cartographic Society
- Commission National Atlas of Belgium
- Belgian sub-commission Cartography and GIS
- President of the Belgian sub-commission Cartography and GIS
- Chair of the Commission on Management and Economics of Map Production of the ICA

Projects
Several projects with SSTC, Belgian federal and regional governments, Unesco, private partners,…
For an overview: see website

Publication list and research description
Personal website: http://allserv.ugent.be/~pdmaeyer