

MACIEJ ZYCH, KATARZYNA MEDOLIŃSKA
Statistics Poland
Department of Spatial and Environmental Studies
m.zych@stat.gov.pl; k.medolinska@stat.gov.pl

New statistical atlases of voivodships and Poland

Abstract. In 2018, 100 years had passed since the Central Statistical Office of Poland (since 2017: Statistics Poland – GUS) was established. This anniversary was considered an opportunity for preparation of a series of cartographic publications, i.e. 16 statistical atlases of Polish voivodships (first order administrative units) and the *Statistical atlas of Poland*. Publication of such a series of atlases is a new undertaking in the history of Polish statistics – it involved both the employees of the head office of Statistics Poland in Warsaw and the staff of statistical offices in 16 voivodships.

Until 2018 Polish public statistics did not have many such publications. The first atlas publication of Central Statistical Office was *Republic of Poland – statistical atlas* released in 1930. The next *Statistical atlas*, covering all of Poland, was published only in 1970. Subsequent statistical atlases were published over 30 years later – the atlases of five voivodships, published in 2006–2016, and the *Demographic atlas of Poland* published in 2017.

Atlases for individual voivodships were prepared by the relevant regional statistical offices. The project was managed by the head office of Statistics Poland which prepared the guidelines and provided technical and substantive supervision. Due to different sizes of voivodships, the atlases were prepared in scales from 1:900,000 (Opolskie and Świętokrzyskie Voivodships) to 1:1,500,000 (Mazowieckie and Wielkopolskie Voivodships). A standard page contains a map of a voivodship divided into communes (gminas) or counties (powiats) and a map of Poland at the scale of 1:9,500,000 divided into voivodships. The number of pages of the voivodship atlas is 104 with 165 maps: 76 maps of voivodships, 76 maps of Poland, one administrative map of Poland at the scale of 1:3,800,000 and 12 maps of the European Union or Europe at the scale of 1:21,500,000.

The *Statistical atlas of Poland* was published in early July 2018. It consists of 216 pages, with 281 maps (full-page maps of Poland at the scale of 1:3,800,000, quarter-page maps of Poland at the scale of 1:9,000,000, full-page maps of Europe or the European Union at the scale of 1:21,500,000, and half-page world maps at the scale of 1:200,000,000) and 175 charts/graphs. Maps made by using quantitative cartographic presentation methods predominate in the atlas – choropleth and diagram methods are used most frequently (they are observed on 263 maps).

Statistical atlases of voivodships and the *Statistical atlas of Poland* count 1888 pages in total with 2934 maps, on which the development of the country is presented in relation to regional and local conditions. All atlases are bilingual, Polish-English. Publications printing was co-financed from EU funds within the Operational Programme Technical Assistance 2014–2020. Atlases are also available free of charge in the PDF format on the website of Statistics Poland: <https://stat.gov.pl/statystyka-regionalna/publikacje-regionalne/podreczniki-atlasy/atlasy/>.

Keywords: atlases, statistical maps, thematic maps

1. Introduction

The year 2018 marks 100 years of Central Statistical Office (since 2017: Statistics Poland) which was founded by the Regency Council of the Kingdom of Poland on 19th July 1918 (*Reskrypt... 1918*). On the anniversary, the visual image of the office was refreshed – a new logo

and graphic design of publications of official statistics¹ were introduced and the method of

¹ The official statistics services (commonly known as “official statistics”) consist of the President of Statistics Poland as well as directors of statistical offices and units supervised by the President of Statistics Poland, pursuant to the Law of 27 August 2009 on public finance (*Ustawa o statystyce publicznej*, 2018).

presentation of statistical data in publications was changed. Presentation of data in the form of statistical charts is being phased out, because they are available in currently updated databases, and replaced with other types of presentation: descriptions and analyses as well as graphic presentation on diagrams and statistical maps. The latter method is represented not only by a growing number of statistical maps devoted to particular issues but also by preparing publications consisting mostly of maps, i.e. statistical atlases.

2. Outline of the history of statistical atlases published by Statistics Poland

Statistical publications comprising mostly maps in former times did not use to be prepared by Central Statistical Office too often. After 1918 the first publication linked to public statistics was the *Statistical atlas of Poland* in two parts from 1924–1925. However, it was published outside of Central Statistical Office (although its authors were at the time employed by this Office: its vice-director Ignacy Weinfeld as well as department directors Edward Szturm de Sztrem and Jan Piekalkiewicz). In the introduction to the first fascicle of the atlas the essence of graphic presentation of data was pointed out: “Graphic presentation compared with data tables gives a picture which is easier to comprehend, analyze and memorize, especially for wider audience.” Both parts of the atlas had 58 pages, including 28 pages with maps (mainly choropleths and diagram maps relating to voivodships) and 12 pages with charts. The publication had also a second version in the form of the *Statistical school atlas of Poland*, published in 1925 and prepared by the same authors; the atlas had 60 pages including 26 map pages.

The first atlas publication of Central Statistical Office was *Republic of Poland – statistical atlas* published in 1930. It had 57 pages, including 63 maps (mainly choropleths and diagram maps relating to voivodships or counties) and numerous charts presented in 42 tables. Its authors were Edward Szturm de Sztrem, Stefan Szulc, Jan Piekalkiewicz and Kazimierz Kocharński. Despite initial intentions, the atlas turned out as an one-off publication.

It is worth noting the English language *Statistical atlas of Poland*, published in 1942 in London by the Ministry of Information of the Govern-

ment of the Polish Republic in Exile. Its author was Edward Szturm de Sztrem, the pre-war director of Central Statistical Office. The atlas had 120 pages, including 47 pages with maps and charts.

The next *Statistical atlas* covering all of Poland was published only in 1970. The publication had 204 pages in the format of 27×27cm, including 150 maps (mainly choropleths and diagram maps relating to voivodships or powiats) and charts. The editorial team (led by Janusz Stępiński) and the team of authors counted 28 people. However, it was another one-off publication, subsequent statistical atlases followed over 30 years later. They were prepared by statistical offices of voivodships after the administrative reform of 1998²:

- *Statistical atlas of Warmińsko-Mazurskie Voivodship 2005* (50 pages) – prepared and published in 2006 by the Statistical Office in Olsztyn;

- *Statistical atlas of social issues* (102 pages) – atlas of Zachodniopomorskie Voivodship prepared by the Statistical Office in Szczecin, published by the Marshal Office of Zachodniopomorskie Voivodship in 2012;

- *Agricultural Census 2010. Atlas. Agricultural production in rural areas of Mazowieckie Voivodship* (96 pages) – prepared and published by the Statistical Office in Warsaw in 2013;

- *Statistical atlas of Lubelskie Voivodship 2012* (140 pages) – prepared by the Statistical Office in Lublin, published in 2014;

- *National Census of Population and Housing 2011. Atlas of counties and communes of Mazowieckie Voivodship* (226 pages) – prepared and published by the Statistical Office in Warsaw in 2014;

- *Statistical atlas of Małopolskie Voivodship 2016* (70 pages) – prepared by the Statistical Office in Kraków in collaboration with the Faculty of Mining Surveying and Environmental Engineering of the AGH University of Science and Technology in Kraków, published in 2016.

In the 98 years of activity of Central Statistical Office (1918–2016) only two statistical atlases of the whole country were published (in 1930 and 1970) as well as six atlases of voivodships

² On January 1, 1999 the new administrative division was introduced in Poland. The two stage administrative division, with 49 voivodships, valid from 1975 was replaced with a three-stage one consisting of 16 voivodships.

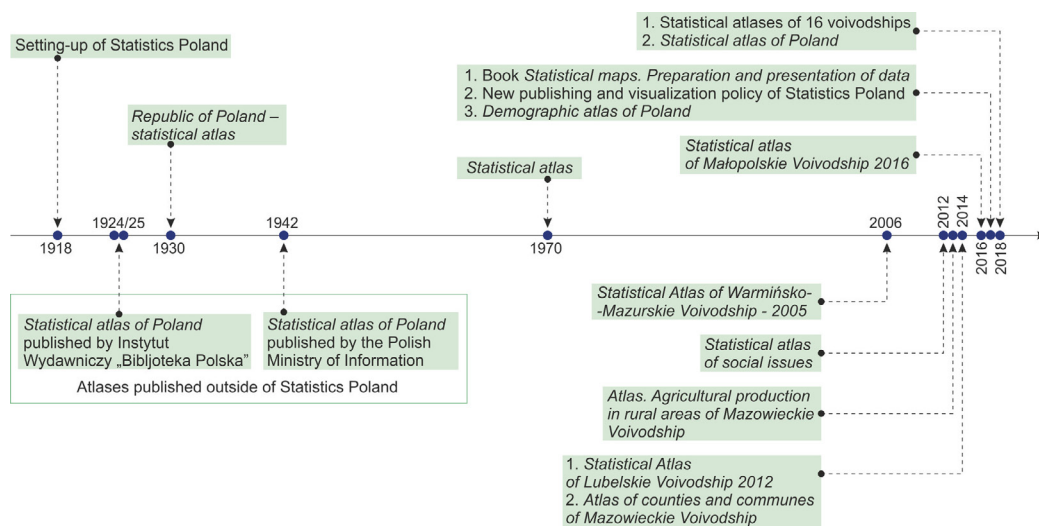


Fig. 1. Timeline on publication dates of statistical atlases

(in 2006, 2012–2014 and 2016). Two more statistical atlases linked to public statistics were also published outside of Central Statistical Office; they were prepared in 1924/25 and 1942 (fig. 1).

3. Statistical Maps. Data elaboration and presentation handbook

Over forty years ago, in 1976, Central Statistical Office published *Statistical charts and maps* (*Wykresy i mapy statystyczne*), a handbook authored by Kazimierz Kocimowski and Jerzy Kwiatek. It was a compendium of knowledge on graphic presentation of statistical data and applied standards, accounting for the specifics of the process of data preparation using contemporary technical capacity. Since the late 70-ies the reality of work of public statistics has changed significantly. Popularization of digital tools not only simplified work and increased its efficiency, but also enabled more advanced analyses. Application of computer graphic tools, followed by geographic information system (GIS) made preparation of maps and statistical charts much easier.

Analysis of cartographic elaborations prepared in recent years by Statistics Poland and statistical offices – not only statistical atlases of voivodships (2006, 2012, 2013, 2014 and 2016),

but also statistical maps presented in various publications – showed the necessity of preparing current and easily accessible guidelines which would aid correct map preparation. It should be noted that cartographic visualization of data in public statistics is performed mainly by statisticians rather than cartographers.

Consequently, Statistics Poland prepared a publication titled *Statistical maps. Data elaboration and presentation* (*Mapy statystyczne. Opracowanie i prezentacja danych*; M. Pieniżek, M. Zych 2017), whose main objective was to present non-cartographers with the standards of cartographic presentation of statistical data resulting from the tradition of Polish cartography and statistics, as well as show problems of using GIS software for preparation of statistical maps. It focused on issues closely related to elaboration of statistical maps, especially in the printed form, or used as illustrations (mainly in raster form) in online publications. This extensive volume (260 pages) improved statisticians' knowledge on how to use statistical maps, what they can present and how to correctly elaborate such maps avoiding errors. It also gave theoretical background for correct preparation of maps for the purpose of statistical publications. Consequently, the management of Statistics Poland exhibited increased interest in cartographic statistical presentations, including atlases.

4. New visualization and publishing policy

In 2017 first efforts to change the visual image of Polish statistics were made. The first stage comprised the change of the logos of Statistics Poland and statistical offices in voivodships. The open competition was finalized in July 2017 and the winning design was implemented upon the decision of the president of Statistics Poland as the new logo of public statistics (with a special variant for the 100th anniversary of Statistics Poland in 2018).

Logo selection was connected to the elaboration of the *Book of the visual identification of official statistic*. It contains not only a set of rules and regulations of using the logos of Statistics Poland and 16 statistical offices, but also provides detailed description of graphic rules in any publications of public statistics to ensure their visual uniformity.

Uniform fonts were selected – Myriad Pro for printed publications and Fira Sans for digital publications, letters (with Arial optional) – as well as font sizes, interlines, paragraphs, highlighting methods, etc. The approved set of colours was determined – mainly cold – which should harmonize with the colour of the logo, with warm colours inadvisable. The set of 7 hues was selected for use: “logo” green, light green, dark green, celadon, turquoise, “logo” dark blue and violet. Also, two colors for limited use were defined: dark yellow and red. The above colours may be used in full or lower intensity. Black and gray may be used in a similar way.

The new rules will certainly help to unify graphic design of publications. However, they became quite limiting because of rather rigorous framework of graphic presentation of statistical data, especially on maps. Implementation of the new graphic rules started at the end of 2017 and was continued until the end of 2018.

5. Demographic atlas of Poland

One of the first publications prepared in a uniform graphic design was the *Demographic atlas of Poland* (fig. 2). Contrary to previous statistical atlases of Poland it focuses on one section of statistics. The Atlas has 128 pages with 126 maps (mainly prepared using choropleth and diagram methods) and 165 charts. The maps present data from 2016, mainly for Poland, divided into communes, counties and voivod-



Fig. 2. The cover of the *Demographic atlas of Poland* published at the end of 2017

ships. Moreover, 11 maps present the European Union (maps with data for countries or NUTS 2³ statistical units). A separate chapter, richly illustrated, presents the most important demographic data from the 10 censuses conducted so far (1921–2011).

In the atlas it was attempted to put into practice the guidelines for correct map elaboration presented in *Statistical maps. Data elaboration and presentation*. The attempt was successful – the atlas won the first place in the 18th “Map of the year 2017” competition organized by the Association of Polish Cartographers in the category of “Other maps and printed atlases” (J. Krupski 2018).

6. Statistical atlases of voivodships

Very good reception of the *Demographic atlas of Poland* among the users of publications of Statistics Poland resulted in a decision to continue publication of statistical atlases. The year of the anniversary of Statistics Poland provided an occasion – a series of statistical atlases was published: 16 atlases of voivodships and the *Statistical Atlas of Poland*.

³ NUTS – Classification of Territorial Units for Statistics (also known as: Nomenclature of Territorial Units for Statistics) is a geographical standard for statistical division of the economic territory of the EU Member States into three regional levels of certain classes of the population. Each Member State of the European Union is divided into territorial units of NUTS 1 level, each of which is further divided into territorial units of NUTS 2 level, and finally each NUTS 2 level unit is divided into territorial units of NUTS 3 level. One territorial unit may represent more than one NUTS level (*Regions in the European Union...* 2018).

The atlases of individual voivodships were elaborated by relevant statistical offices, following the guidelines adapted by Statistics Poland and under the office's technical and substantive supervision, with some maps prepared directly within Statistics Poland.

The guidelines for the series of statistical atlases included, on the one hand, elaboration of a list of topics to be presented on maps, and on the other – elaboration of guidelines for graphic design and layout of atlases. The selection of topics proved difficult – it was assumed that maps should present only data owned by public statistics. However, it turned out that for some important topics there was no data at territorial levels of division into communes or counties, which was necessary for atlases of voivodships. Also, the topics had to be important or interesting enough to justify their inclusion in the atlas.

Finally, six thematic sections were determined. The first – *Location and administrative division* – is of introductory character. It presents the geographical location of a given voivodship within Poland (administrative map of Poland) and Europe (political map of Europe), as well as its administrative division. The following four sections refer to the presentation of data for a given voivodship: *Human capital* (divided into three chapters: *Demography, Education, Labour resources*), *Quality of life* (five chapters: *Infrastructure, Health care, Social welfare, Culture, Safety*), *Economy* (six chapters: *Regional accounts, Entrepreneurship, Public finance, Agriculture, Tourism, Road infrastructure*) and *Environment*. The last section – *Voivodship as compared with EU NUTS 2 regions* – presents basic data for statistical regions of the European Union at NUTS 2 level, the equivalent of a voivodship in Poland before 2018 (the same map appears in atlases of all voivodships).

The guidelines outlined the topics to be presented on maps (i.e. a map page topic) and proposals of topics to be presented on charts. Consequently, the atlas of each voivodship includes maps on all the listed topics. An option to add topics characteristic for each voivodship was provided (this option was used only in the atlas of Pomorskie Voivodship – maps of maritime economy, and in the atlas of Podkarpackie Voivodship – maps of sport and additional maps of tourism).

The next important stage in the elaboration of guidelines was to determine the format of atlases. Voivodships in Poland vary significantly in their shape and size. Therefore two approaches were possible – preparing atlases at the same scale, which would result in different formats, or using different scales in order to achieve 16 atlases in the same format. The first solution facilitates comparison of maps between atlases, while the second eliminates big differences in atlas formats. Finally the second approach was chosen.

However, the elimination of size differences of atlases by using different scales did not solve the problems arising from different shapes of voivodships. Numerous trials of arranging voivodships on different page formats were conducted. Those attempts pointed to the square shape of the atlas as the most appropriate, because it enabled placing voivodships of different shapes on a single page with remaining space used for other elements of contents. The next step was to develop a page layout of the atlas. Since publications of Statistics Poland were intended to be uniform, the decision was made to use the solution which had been used before in the *Demographic atlas of Poland*, and adapt it to the different format of the publication.

Another significant issue was how to adapt the colour scale of the atlas to the rules of visualization of public statistics, which was mainly due to a limited number of approved colours. It was decided that each section of the atlas would have its own colour, and that choropleth maps would use the shades of the colour of the section (other colours were selected for negative values if they appeared in the choropleth map and for diagrams). The final colours were:

- *Location and administrative division* – dark yellow (section colour used only for page headings, on administrative maps other colours were used),
- *Human capital* – red,
- *Quality of life* – celadon,
- *Economy* – “logo” dark blue,
- *Environment* – dark green,
- *Voivodship as compared with EU NUTS 2 regions* – violet.

Basing on the colours of individual sections, colour scales were prepared for choropleth maps – containing from 4 to 8 classes, for various types of diagram maps and for charts.

The arrangement of constant elements of each page made it possible to determine the area which could be used for maps, charts and other additional information (e.g. necessary

- 1:1,200,000 (Łódzkie, Podkarpackie, Podlaskie, Pomorskie),
- 1:1,300,000 (Dolnośląskie, Warmińsko-Mazurskie, Zachodniopomorskie),

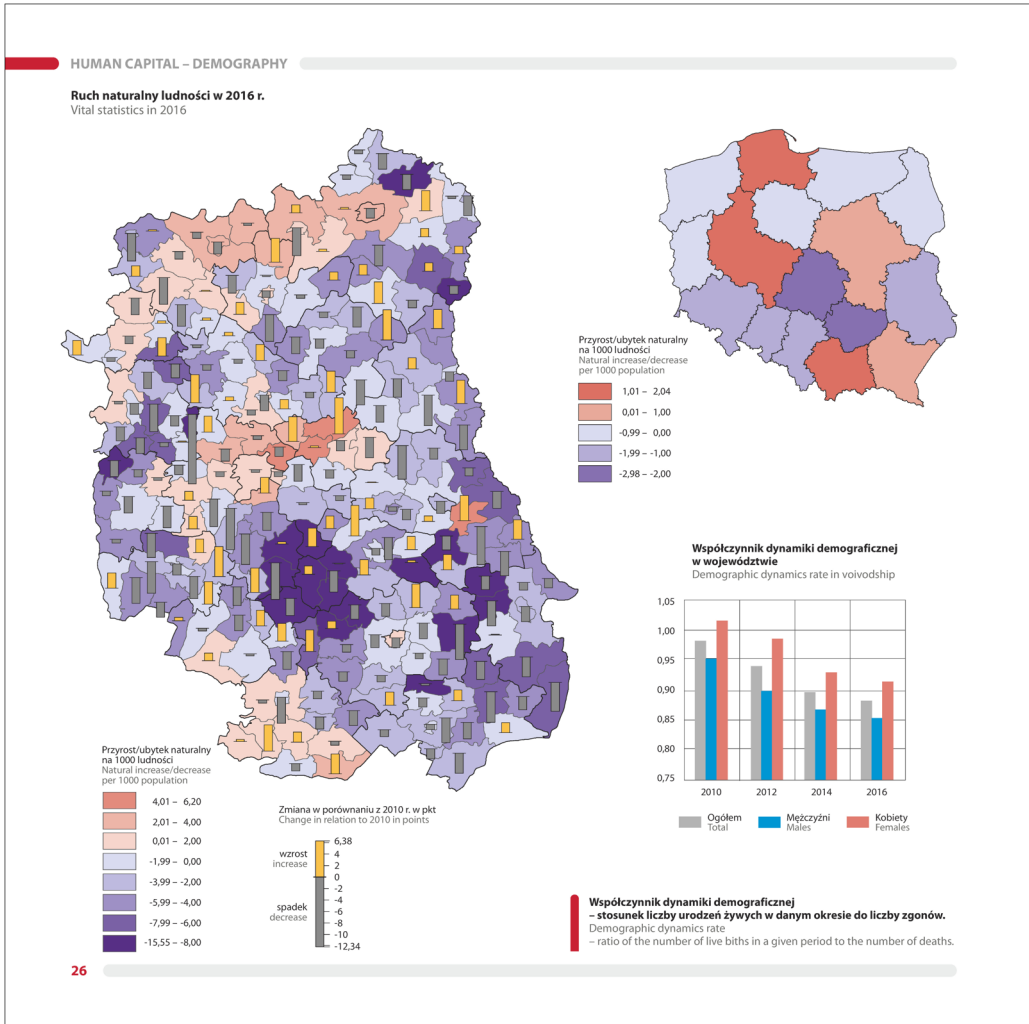


Fig. 3. An example of content layout on a page of the statistical atlas of the voivodship – p. 26: *Vital statistics in 2016* from the *Statistical atlas of Lubelskie Voivodship*

definitions). This, in turn, enabled selection of scales of maps for individual voivodships:

- 1:900,000 (Opolskie, Świętokrzyskie),
- 1:1,000,000 (Śląskie),
- 1:1,100,000 (Kujawsko-Pomorskie, Lubuskie, Małopolskie),

- 1:1,400,000 (Lubelskie),

- 1:1,500,000 (Mazowieckie, Wielkopolskie).

Despite such variety of scales, the atlases of voivodships can be treated as uniform regarding contents, because they are based on statistical units of administrative division of Poland (voi-

voivodships, counties, communes). For each voivodship a central meridian was established as well as base maps with boundaries taken from the National Register of Boundaries, generalized to a proper scale were used.

A standard page of the statistical atlases of voivodships includes a map of a voivodship divided into communes or counties (fig. 3). A map of Poland divided into voivodships at the scale of 1:9,500,000, which is also placed on the page, is made using the choropleth method. As a rule it presents the same topic as the map of the voivodship. Besides these two maps there is

usually a chart thematically connected to the main map, sometimes accompanied by definition of terminology.

In addition to the maps of Poland, the atlas presents maps with selected data for the European Union countries. Full page maps of the area at the scale of 1:21,500,000 were designed; they cover all European countries (without eastern fragments of the European part of Russia) and Cyprus. Base maps with boundaries taken from the Eurostat bases were properly generalized, analogically to base maps for the map of Poland and voivodships.

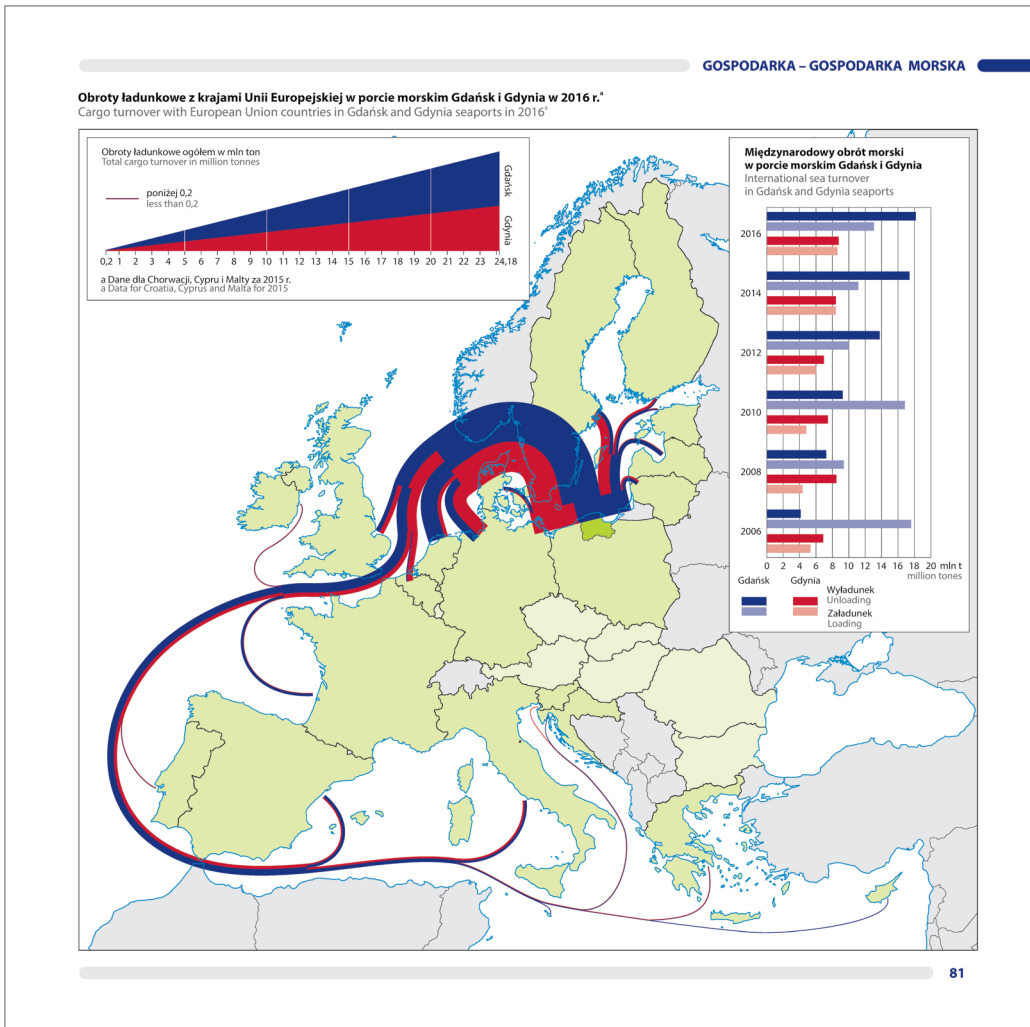


Fig. 4. An example of a map with the linear structural diagram – p. 81: Cargo turnover with European Union countries in Gdańsk and Gdynia seaports in 2016 from the Statistical atlas of Pomorskie Voivodship

The planned volume of the atlas, without additional topics, was 104 pages including 165 maps: 76 maps of voivodships, 76 maps of Poland at the scale of 1:9,500,000, 1 administrative map of Poland at the scale of 1:3,800,000, 11 maps of the European Union at the scale of 1:21,500,000 and 1 political map of Europe at the same scale.

Maps of Poland were prepared in the Mercator transverse projection, and the political map of Europe in the Lambert conformal conic projection. Data used for preparation of base maps came from the National Register of Boundaries, General Geographic Database and geographical bases of Eurostat, EuroGeographics AISBL and Natural Earth.

Statistical data used in the atlases was retrieved from databases of public statistics coming from statistical surveys and reportings, as well as data from information systems made available to public statistics by external sources. Eurostat databases were used for visualization of phenomena within the European Union. All statistical maps from the main set of topics were prepared using the choropleth method, and on some of them the diagram method was used as well (fig. 4).

The time devoted to the elaboration of statistical atlases of voivodships was significantly limited. Work on initial assumptions started in early 2018, complete editorial guidelines together with the layout of the atlas were ready before the end of February 2018. Editorial work could start. The first atlas of the series, *Statistical atlas of Mazowieckie Voivodship* was published at the end of May 2018, and the last one – *Statistical atlas of Zachodniopomorskie Voivodship* in October 2018.

7. Statistical atlas of Poland

At the stage of elaboration of assumptions for the atlases of voivodships it was decided that it would be beneficial to complement them with a separate atlas of the whole country – *Statistical atlas of Poland* (fig. 5). The atlas was published in July 2018 as the first such publication since 1970. The editorial team had 24 members.

In the initial assumptions of the *Statistical atlas of Poland* it was decided that its graphic form would resemble the graphic form of the series of 16 atlases of voivodships. It was also determined that it would present the topics



Fig. 5. The cover of the *Statistical atlas of Poland* published in July 2018

depicted in the atlases of voivodships as well as additional topics basing on data referring to individual voivodships or the whole country. International comparisons, which in the atlases of voivodships were limited to the countries of the European Union, in the *Statistical atlas of Poland* were extended to include statistical maps of the world.

The assumed range was divided into seven topic sections. The first – *Location and division* presents Poland in Europe and various divisions of the country used in statistics. The next four sections present statistical data for the area of the whole country and are titled the same as in the atlases of voivodships (although their internal division is different): *Human capital* (three chapters: *Demography, Education and skills, Labour resources*), *Quality of life* (eight chapters: *Situation of households, Poverty and social exclusion, Housing, Health care, Social welfare and family support, Culture and recreation, Public safety, Civil society*), *Economy* (five chapters: *Gross domestic product, Passenger border traffic, Public finance, Entrepreneurship, Production and services*) and *Environment*. The next two sections present international comparisons: *Poland as compared with the EU* (basic data for EU countries or statistical regions at NUTS 2 level) and *Poland as compared with the world* (data referring to countries).

The format chosen for the atlases of voivodships proved to be appropriate also for the *Statistical atlas of Poland*, therefore it was decided to keep it. The graphic design of the atlases of

voivodships was used as well. Selection of constant elements of the atlas page made it possible to determine the area to be devoted to maps, charts and other information. It was decided that there would be two main layouts of pages with maps of Poland – pages with a single large map of Poland (fig. 6), divided into communes, counties or NUTS 3 subregions, or pages with quadruple division (fig. 7), with small maps of Poland (mainly divided into voivodships) and charts. Pages presenting data for the European Union countries have a layout

identical to that used in the atlases of voivodships (one full-page map, fig. 8). In the case of presenting data for the whole world there are two maps per page. This way the following map scales were determined:

- full-page map of Poland – 1:3,800,000,
- quarter-page map of Poland – 1:9,000,000,
- full-page map of Europe/European Union – 1:21,500,000,
- half-page map of the World – 1:200,000,000.

Colours used in *Statistical atlas of Poland* were the same as in the statistical atlases of

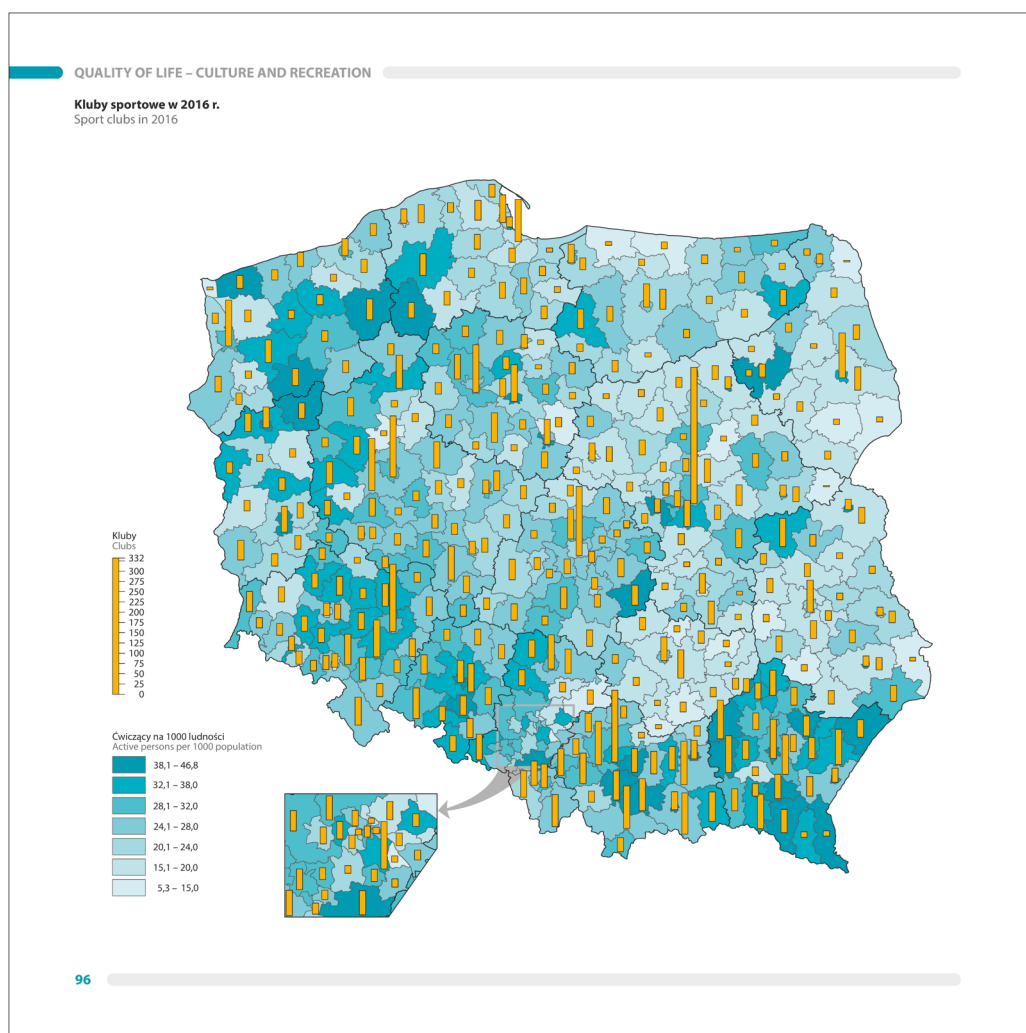


Fig. 6. An example of a page with one large map of Poland from the *Statistical atlas of Poland* – p. 96: *Sport clubs in 2016*

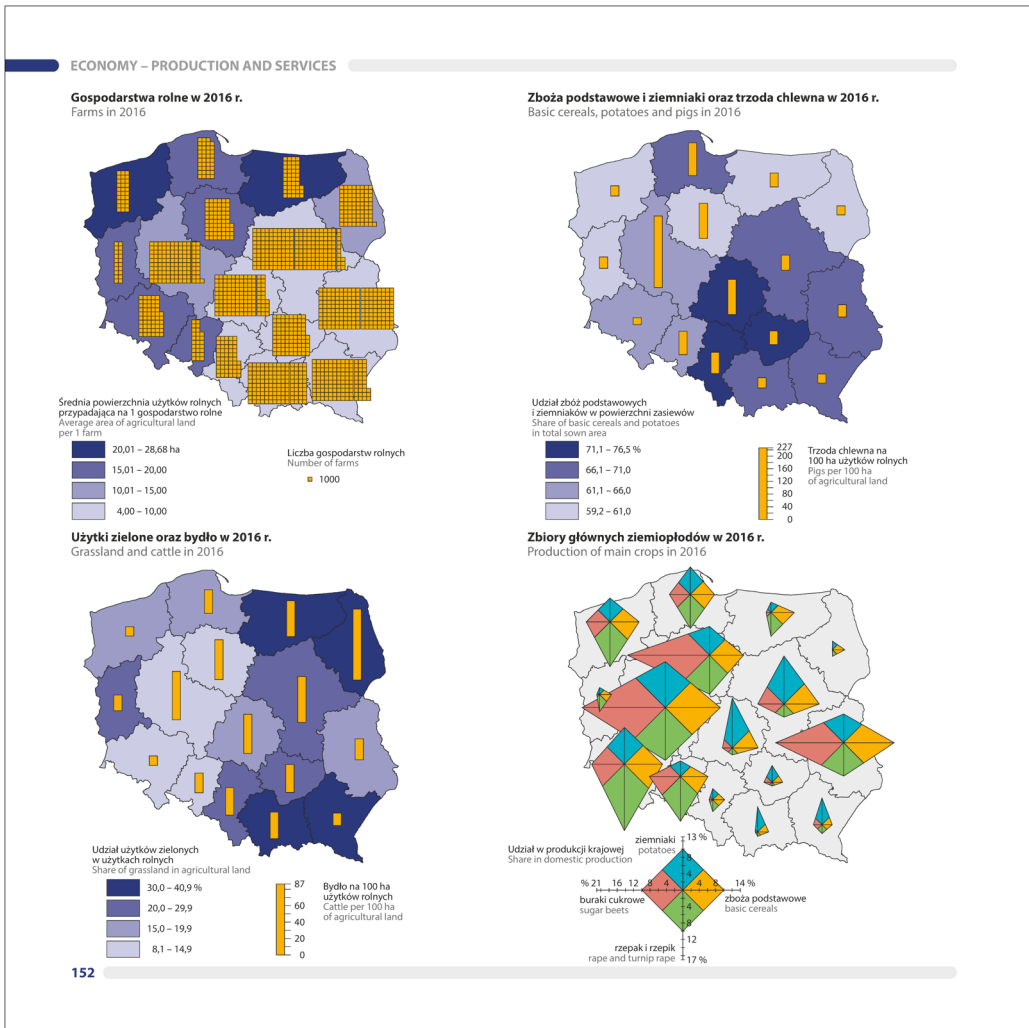


Fig. 7. An example of a page with quadruple division from the *Statistical atlas of Poland* – p. 152 related to agriculture (section *Economy*)

voivodships, with turquoise chosen for the additional seventh section. Similarly as in the atlases of voivodships, section colours provided bases for choropleth maps colour scales (4–8 classes), for colours of negative values in choropleth maps and for colours of diagrams. Framework colour schemes for charts were also determined.

Map projections for the maps of Poland and Europe are identical as in the atlases of voivodships, sources of base maps are also the same. World maps, absent from the atlases of

voivodships were prepared in the Robinson projection.

As in the atlases of voivodships, the source of statistical data for Poland were the databases of public statistics. For the presentation of phenomena in international contexts, bases of the European Commission (mainly Eurostat), OECD, World Bank and UN were used.

The Atlas has 216 pages, with 281 maps and 175 charts. 108 maps are full-page (maps of Poland and the European Union), 18 maps are half-page (maps of the world), and 155 maps

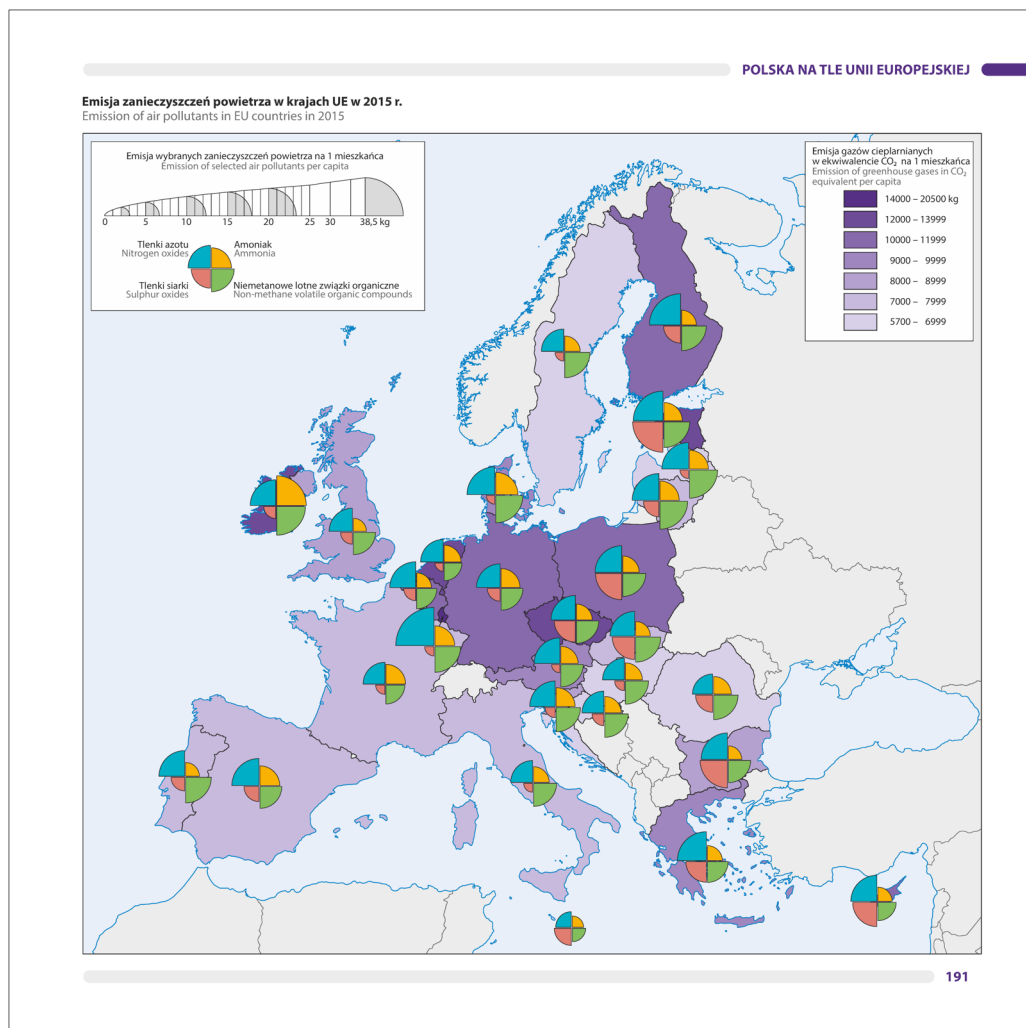


Fig. 8. An example of a page with a map of the European Union from the *Statistical atlas of Poland* – p. 191: *Emission of air pollutants in EU countries in 2015*

are quarter-page (maps of Poland). Most maps present Poland divided into voivodships – there are 134 of them. The second largest group are maps of Poland divided into communes – 41, and counties – 27. Of the remaining maps of Poland in the atlas, there are 5 which present the division into NUTS 3 statistical subregions, 4 which present the division into NUTS 1 statistical macroregions and 23 maps elaborated in other divisions, or without territorial divisions. Among the maps of the European union, 18 pre-

sent division into states, and 11 into NUTS 2 statistical regions.

Majority of the maps in the atlas were prepared using quantitative cartographic presentation methods. The first section is an exception – qualitative methods prevail here (including a map of the administrative division of Poland, a political map of Europe, maps of statistical divisions of Poland).

In the atlas the two dominant methods are the choropleth method and the diagram method.

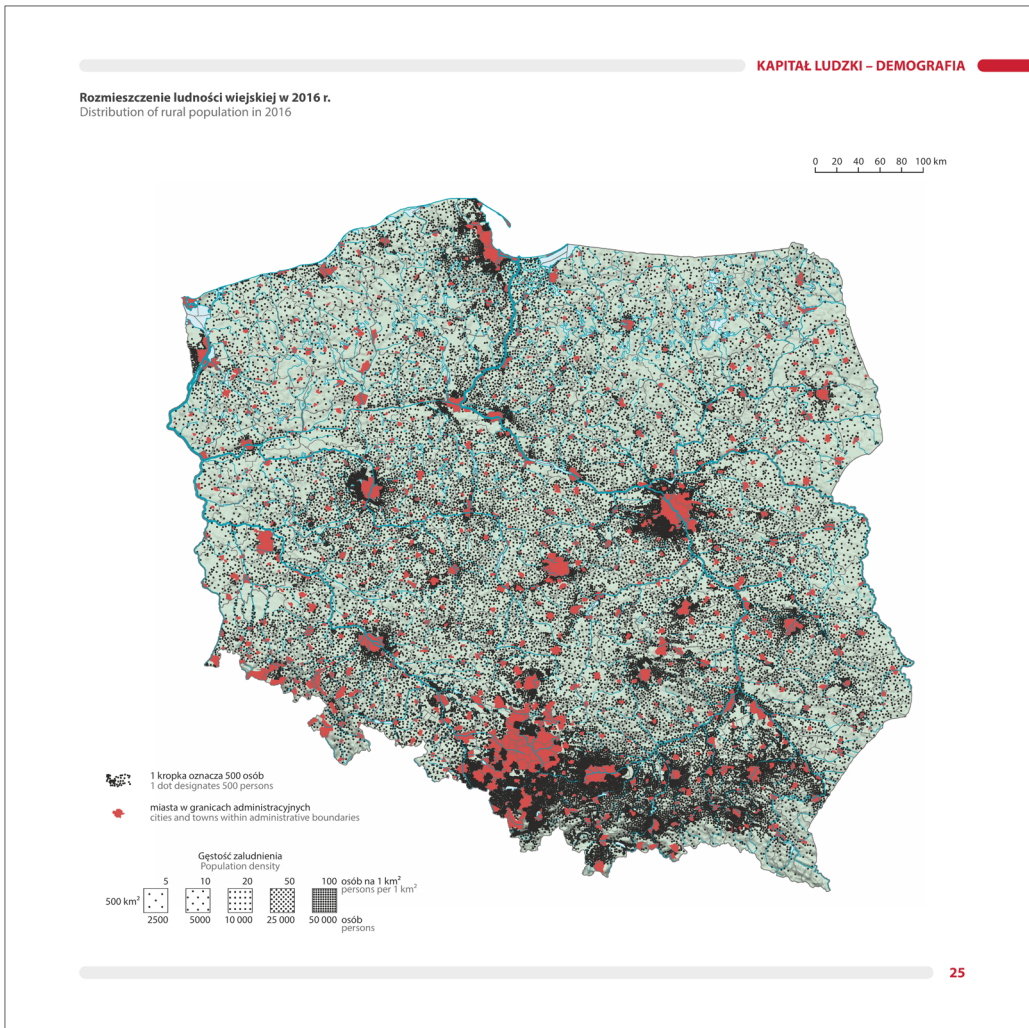


Fig. 9. The map *Distribution of rural population in 2016* from the *Statistical atlas of Poland* (p. 25)

They were used on 263 maps, with both methods used together on 142 maps (figs. 6, 7, 8). One map (distribution of rural population) uses the dot method (fig. 9), and 17 were prepared with the chorochromatic areal method, sometimes applied together with the signature method.

Most of the choropleth maps are related to an area – it applies to 231 maps. Among diagram maps also those related to an area dominate – it applies to 140 maps, which results from the method of data collection by public statistics, mainly related to administrative units.

After determining the editorial guidelines, the work on the atlas involved collection of statistical data to be presented on maps and charts. This was performed by 11 persons. Maps, in turn, were prepared by only two persons – it helped to keep the graphic uniformity of maps. Charts were prepared simultaneously. At the final stage the complete publication underwent substantive and technical correction. The total work on the *Statistical atlas of Poland* took only four months. Despite such a short time, the authors achieved proper accuracy and compliance with the rules of cartography, rejecting any “shortcuts”.

8. Summary

Statistical atlases of voivodships and the *Statistical atlas of Poland* count a total of 1888 pages with 2934 maps which present the development of the country in relation to regional and local conditions, as well as the situation within the European Union and in the world. Presented economic, social and environmental topics and the territorial dimension provide information support for spatial analyses which are performed for the purpose of monitoring the implementation of the public policy guidelines.

The atlases published in 2018 are larger in number and volume than all the earlier atlas publications of public statistics combined. Hopefully, they will become a valuable, interesting and user-friendly source of information on the socio-political situation of Poland (also on the background of the European Union and the world), its voivodships and their internal diversity.

We hope that the statistical atlases of voivodships and the *Statistical atlas of Poland*,

which were prepared following the new graphic guidelines of public statistics and which present statistical data in a cartographically varied way, will be welcome by readers of statistical publications – also by the scientific, including cartographic, circles.

The atlases are also a certain test if at the time of digital society there still exists demand for traditional publications of this sort.

*

Printing of publications was co-financed from EU funds within the Operational Programme Technical Assistance 2014–2020. Atlases are also available free of charge in the PDF format on the website of Statistics Poland: <https://stat.gov.pl/statystyka-regionalna/publikacje-regionalne/podreczniki-atlas/atlas/>.

*

The article is based on the presentation “Statistical atlases of voivodships and Poland” which was shown at the 1st Cartographic Open Plenary Meeting, Lublin – Zwierzyniec 16–19 October 2018.

Literature

- Kocimowski K., Kwiatek J., 1976, *Wykresy i mapy statystyczne*. Warszawa: Główny Urząd Statystyczny.
- Krupski J., 2018, *Rozstrzygnięcie konkursu Stowarzyszenia Kartografów Polskich „Mapa Roku 2017. „Polski Przegląd Kartograficzny. Suplement w języku polskim”* T. 50, nr 2, pp. 272–274.
- Księga identyfikacji wizualnej statystyki publicznej*, 2018. [Warszawa]: Główny Urząd Statystyczny.
- Pieniążek M., Zych M., 2017, *Mapy statystyczne. Opracowanie i prezentacja danych*. Warszawa: Główny Urząd Statystyczny.
- Regions in the European Union. Nomenclature of territorial units for statistics – NUTS 2016/EU-28*, 2018. Luxembourg: Publications Office of the European Union.
- Reskrypt Rady Regencyjnej o utworzeniu i organizacji głównego Urzędu Statystycznego*, 1918. „Monitor Polski” Rok 1, nr 100, 19 lipca, p. 1.
- Ustawa o statystyce publicznej*, 2018. „Dziennik Ustaw”, poz. 997, pp. 1–22.
- Atlases**
- Weinfeld I., Szturm de Sztrem E., Piekalkiewicz J., 1924, *Atlas statystyczny Polski. Zeszyt Pierwszy*. Warszawa, Bydgoszcz: Instytut Wydawniczy „Biblioteka Polska”.
- Weinfeld I., Szturm de Sztrem E., Piekalkiewicz J., 1925a, *Atlas statystyczny Polski. Zeszyt Drugi*. Warszawa, Bydgoszcz: Instytut Wydawniczy „Biblioteka Polska”.
- Weinfeld I., Szturm de Sztrem E., Piekalkiewicz J., 1925b, *Szkolny atlas statystyczny Polski*. Warszawa, Bydgoszcz: Instytut Wydawniczy „Biblioteka Polska”.
- Rzeczpospolita Polska – atlas statystyczny*, 1930. Warszawa: Główny Urząd Statystyczny Rzeczypospolitej Polskiej.
- Szturm de Sztrem E., 1942, *Statistical atlas of Poland*. London: The Polish Ministry of Information.
- Stępiński J. (ed.), 1970, *Atlas statystyczny*. Warszawa: Główny Urząd Statystyczny.
- Statystyczny atlas województwa warmińsko-mazurskiego 2005, 2006*. Olsztyn: Urząd Statystyczny w Olsztynie.
- Atlas statystyczny zagadnień społecznych*, 2012. Szczecin: Urząd Marszałkowski Województwa Zachodniopomorskiego.
- Powszechny Spis Rolny 2010. Atlas. Produkcja rolnicza na obszarach wiejskich województwa mazowieckiego*, 2013. Warszawa: Urząd Statystyczny w Warszawie.
- Narodowy Spis Powszechny Ludności i Mieszkań 2011. Atlas powiatów i gmin województwa mazowieckiego*, 2014. Warszawa: Urząd Statystyczny w Warszawie.

- Statystyczny atlas województwa lubelskiego 2012, 2014.* Lublin: Urząd Statystyczny w Lublinie.
- Statystyczny atlas województwa małopolskiego 2016, 2016.* Kraków: Urząd Statystyczny w Krakowie.
- Atlas demograficzny Polski, 2017.* Warszawa: Główny Urząd Statystyczny.
- Atlas statystyczny Polski, 2018.* Warszawa: Główny Urząd Statystyczny.
- Atlas statystyczny województwa dolnośląskiego, 2018.* Wrocław: Urząd Statystyczny we Wrocławiu.
- Atlas statystyczny województwa kujawsko-pomorskiego, 2018.* Bydgoszcz: Urząd Statystyczny w Bydgoszczy.
- Atlas statystyczny województwa lubelskiego, 2018.* Lublin: Urząd Statystyczny w Lublinie.
- Atlas statystyczny województwa lubuskiego, 2018.* Zielona Góra: Urząd Statystyczny w Zielonej Górze.
- Atlas statystyczny województwa łódzkiego, 2018.* Łódź: Urząd Statystyczny w Łodzi.
- Atlas statystyczny województwa małopolskiego, 2018.* Kraków: Urząd Statystyczny w Krakowie.
- Atlas statystyczny województwa mazowieckiego, 2018.* Warszawa: Urząd Statystyczny w Warszawie.
- Atlas statystyczny województwa opolskiego, 2018.* Opole: Urząd Statystyczny w Opolu.
- Atlas statystyczny województwa podkarpackiego, 2018.* Rzeszów: Urząd Statystyczny w Rzeszowie.
- Atlas statystyczny województwa podlaskiego, 2018.* Białystok: Urząd Statystyczny w Białymstoku.
- Atlas statystyczny województwa pomorskiego, 2018.* Gdańsk: Urząd Statystyczny w Gdańsku.
- Atlas statystyczny województwa śląskiego, 2018.* Katowice: Urząd Statystyczny w Katowicach.
- Atlas statystyczny województwa świętokrzyskiego, 2018.* Kielce: Urząd Statystyczny w Kielcach.
- Atlas statystyczny województwa warmińsko-mazurskiego, 2018.* Olsztyn: Urząd Statystyczny w Olsztynie.
- Atlas statystyczny województwa wielkopolskiego, 2018.* Poznań: Urząd Statystyczny w Poznaniu.
- Atlas statystyczny województwa zachodniopomorskiego, 2018.* Szczecin: Urząd Statystyczny w Szczecinie.