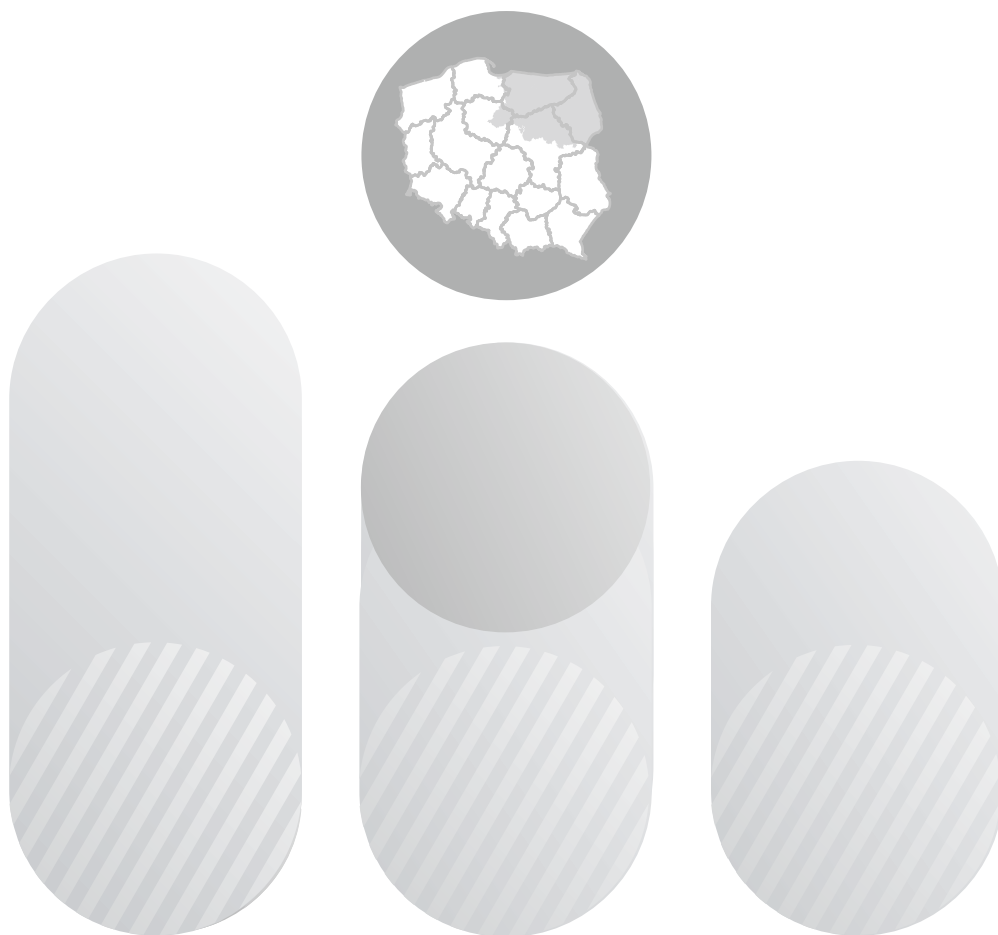




Green Lungs of Poland in 2021



Green Lungs of Poland in 2021

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Statistical Office in Białystok

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Preface

I am pleased to present to you the tenth edition of the publication released every three years and regarding the area of Green Lungs of Poland in the light of statistical data. It is for the first time that the elaboration has been prepared in two language versions, namely Polish and English, and released solely in an electronic form on the Statistics Poland website – stat.gov.pl/en/ and Statistical Office in Białystok – bialystok.stat.gov.pl/en/.

The idea of Green Lungs of Poland was introduced in 1983 by Krzysztof Wolfram. It was intended to integrate environmental protection with economic growth and the progress of civilization in the north-eastern region of the country belonging to the last existing areas of unspoiled nature as well as unusual tourist and cultural values in Europe. In 1988, the agreement on the comprehensive protection and reasonable shaping of environment in the area of Green Lungs of Poland was signed. Six years later, the Sejm of the Republic of Poland in the special declaration acknowledged that the area of Green Lungs of Poland was a region where the rules of ecocodevelopment should be closely adhered to. In the beginning five former voivodships entered the agreement: Białostockie, Łomżyńskie, Olsztyńskie, Ostrołęckie and Suwalskie. In the years that followed, four more voivodships, namely: Ciechanowskie, Siedleckie, Toruńskie and Elbląskie joined the latter. According to the administrative division of the country introduced in 1999, the area of Green Lungs of Poland comprised the following voivodships: Podlaskie, Warmińsko-Mazurskie (excluding Kisielice gmina), the north-eastern part of Mazowieckie as well as parts of Kujawsko-Pomorskie and Pomorskie ones. In 2006, other 24 gminas from Kujawsko-Pomorskie Voivodship were included into Green Lungs of Poland.

The publication consists of an analytical and tabular data presentation together with graphs and charts. Data with, among others, information concerning natural conditions, the state of and threats to the environment and environmental protection as well as forestry, demographic and social situation, municipal infrastructure and dwellings together with culture and tourism in the area of Green Lungs of Poland are presented here in division by voivodships and against the background of the country in 2021. Selected data are presented by voivodships, powiats and gminas. Moreover, there is a review table with major data regarding Green Lungs of Poland in 1993, 1996, 1999, 2003, 2006, 2009, 2012, 2015, 2018 and 2021.

Presenting this publication, I hope that it will be a source of valuable information. At the same time I would like to express my gratitude to all administrative data owners for providing data that help to enrich this elaboration.

Director
Statistical Office in Białystok



Ewa Kamińska-Gawryluk

Białystok, May 2023

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Symbols

Symbol	Description
Hyphen (-)	magnitude zero
Zero: (0)	magnitude not zero, but less than 0.5 of a unit
(0,0)	magnitude not zero, but less than 0.05 of a unit
Dot (.)	data not available, classified data (statistical confidentiality) or providing data impossible or purposeless
Symbol Δ	categories of applied classification presented in an abbreviated form
"Of which"	indicates that not all elements of the sum are given
Comma (,)	Used in figures represents the decimal point – only in xls format tables

Major abbreviations

Abbreviation	Full name	Abbreviation	Full name
PLN	zloty	cont.	continue
pcs	piece, unit	e.g.	for example
km	kilometre	etc.	and so on
m ²	square metre	i.a.	among others
km ²	square kilometre	i.e.	that is
ha	hectare	No.	number
m ³	cubic metre	pp	percentage point
dam ³	cubic decametre	NACE	Statistical Classification of Economic Activities in the European Community
hm ³	cubic hectometre	EC	European Community
kW	kilowatt	GLP	Green Lungs of Poland
MW	megawatt		
Art.	article		

Abbreviation	Full name
sections of the NACE Rev. 2	
accommodation and catering	accommodation and food service activities
trade; repair of motor vehicles	wholesale and retail trade; repair of motor vehicles and motorcycles
divisions of the NACE Rev. 2	
catering	food and beverage service activities
tourism activities	travel agency, tour operator and other reservation service and related activities

Executive summary

Green Lungs of Poland (GLP), located in the north-eastern part of the country, comprise the following voivodships: Podlaskie (118 gminas), Warmińsko-Mazurskie (excluding gmina Kisielice, i.e. 115 gminas), the north-eastern part of Mazowieckie (114 gminas) as well as parts of Kujawsko-Pomorskie (33 gminas) and Pomorskie (6 gminas).

In 2021, the area of GLP equalling 63.2 thousand km² occupied 20.2% of the total area of the country. By far the biggest part of Green Lungs of Poland area was located in Warmińsko-Mazurskie Voivodship (38.0%), whereas the smallest – 1.3% – in Pomorskie one.

According to geodesic records, at the beginning of 2021 agricultural land comprised 60.4% of the total area of the ecoregion and forest land including wooded and shrub land – 29.9%. The structure of land use in GLP remained fairly the same in comparison with the one noted at the beginning of 2018.

In 2021 in the area of Green Lungs of Poland, 772.1 hm³ of water was withdrawn for the needs of the national economy and population, which was 1.5% less than three years before.

In the analysed year, wastewater discharged into the waters or into the ground within the ecoregion area amounted to 585.9 hm³ of industrial and municipal wastewater, which was an increase by 4.5% in comparison with 2018. In 2021, almost all wastewater (i.e. 99.4% of total wastewater) was treated.

In the area of Green Lungs of Poland in 2021 plants of significant nuisance to air purity emitted 1.6 thousand tonnes of particulates and 29.6 thousand tonnes of gaseous pollution (excluding carbon dioxide). It was a decrease by respectively 23.4% and 3.8% in comparison with data from 2018.

At the end of 2021, the total sum power of renewable energy source (RES) installations in the ecoregion area amounted to 1682.6 MW and it grew within three years by 45.5%

At the end of the analysed year, the area of special nature value under legal protection within the GLP area equalled 2236.4 thousand ha, which was 35.4% of the total ecoregion area. This area remained almost equal to the one noted at the end of 2018.

In 2021, GLP gminas produced 2666.1 thousand tonnes of waste (excluding municipal waste), i.e. by 1.7% more than three years before, and collected 1233.5 thousand tonnes of municipal waste (by 8.4% more than in 2018), of which waste collected separately in 2018 comprised 22.9%.

Within the analysed year, outlays on fixed assets in environmental protection in the area of Green Lungs of Poland equalled PLN 1018.7 million (by 12.5% more than in 2018), and in water management – PLN 229.7 million (by 11.1% less).

At the end of 2021, forests in the ecoregion area covered 1839.8 thousand ha. Their area grew slightly, by 0.1%, in comparison with the end of 2018. Forest cover indicator remained the same as three years before – 29.1%.

In gminas of Green Lungs of Poland at the end of the analysed year there were 3878.7 thousand residents, i.e. by 3.2% less than three years before. Analysing the structure of population by economic groups of age, it can be noticed that the share of population at working age in the total GLP residents is gradually diminishing, and the share of post-working age population is increasing.

In 2021, a negative natural increase was noted in the area of Green Lungs of Poland. It amounted to minus 21.9 thousand, while in 2018 it was minus 3.0 thousand. Internal and international net migration for permanent residence was also negative and in 2021 equalled minus 5.8 thousand, while three years before equalled minus 8.2 thousand persons.

At the end of December 2021, within the area of Green Lungs of Poland the number of registered unemployed persons was 119.5 thousand and this number was by 13.8% lower than the one recorded at the end of 2018.

At the end of 2021, gminas of GLP had 1508.1 thousand dwellings and within three years dwelling stocks grew by 40.6 thousand. In 2021, there were 21.1 thousand completed dwellings in the GLP area, which is by 40.6% more than in 2018.

At the end of 2021 there were 92.5% of the total GLP population using water supply system of GLP gminas (i.e. by 0.4 pp more than three years before), the sewage network – 65.3% (by 0.8 pp more), while a gas supply system – 35.2% (by 1.9 pp more).

At the end of December of the analysed year the share of population using wastewater treatment plants in the total population of GLP area was 67.8% and in comparison with this population at the end of 2018 it increased by 1.0 pp.

In September 2021, there were 1603 primary schools for children and youth in the area of Green Lungs of Poland, which provided education to 317.0 thousand students. In the GLP area the number of these schools fell by 53, while the number of students attending them grew by 0.6% in comparison with the value recorded three years before.

In the 2021/22 school year, 754 schools operated in the Green Lungs of Poland area (6678 in the country) providing education to the total of 161.3 thousand students. In comparison with the 2018/19 school year there were 40 establishments of this type more and the number of their students grew by 30.3%.

At the end of December 2021, 28 higher education institutions and 23 branches (of higher education institutions with their seat outside GLP) provided education to 82.6 thousand students (including foreigners), i.e. by 4.8% less than at the end of December 2018.

Pre-primary education in GLP gminas in the 2021/2022 school year was provided to 144.8 thousand children. In the analysed school year, the share of children attending pre-primary establishments in Poland grew by 7.7% in relation to the number noted three years before.

At the end of 2021, out-patient health care within the area of Green Lungs of Poland comprised 2358 out-patient departments and 541 medical practices providing health services financed from public funds. In relation to the end of 2018, the number of out-patient departments in the GLP area increased by 3.5%, whereas the number of medical practices decreased by 28.8%.

At the end of the analysed year, there were in total 15.1 thousand places in establishments providing care to children up to the age of 3 located in the area of Green Lungs of Poland. The number of places in the ecoregion area grew by 43.9% in comparison with the one noted three years before.

At the end of 2021, there were 12.6 thousand residents in homes and facilities of stationary social welfare located in the GLP area, i.e. 1.8% more than at the end of December of 2018.

As of the end of July 2021 the number of beds in tourist accommodation establishments located in the area of Green Lungs of Poland was 76.7 thousand. Their number decreased by 7.1% in relation to the number recorded three years before. In 2021, the number of tourists accommodated in these establishments was 1937.6 thousand, i.e. by 33.6% less than in 2018.

At the end of 2021, 2532.2 km bicycle roads were in the GLP area. Their length grew by 664.0 km in relation to the one noted at the end of December of 2018.

According to REGON register data, 389.9 thousand entities of the national economy (excluding persons tending private farms in agriculture) were registered in the Green Lungs of Poland area at the end of 2021. Their number grew by 10.4% in comparison with the number at the end of 2018.

Chapter 1. Area and administrative division

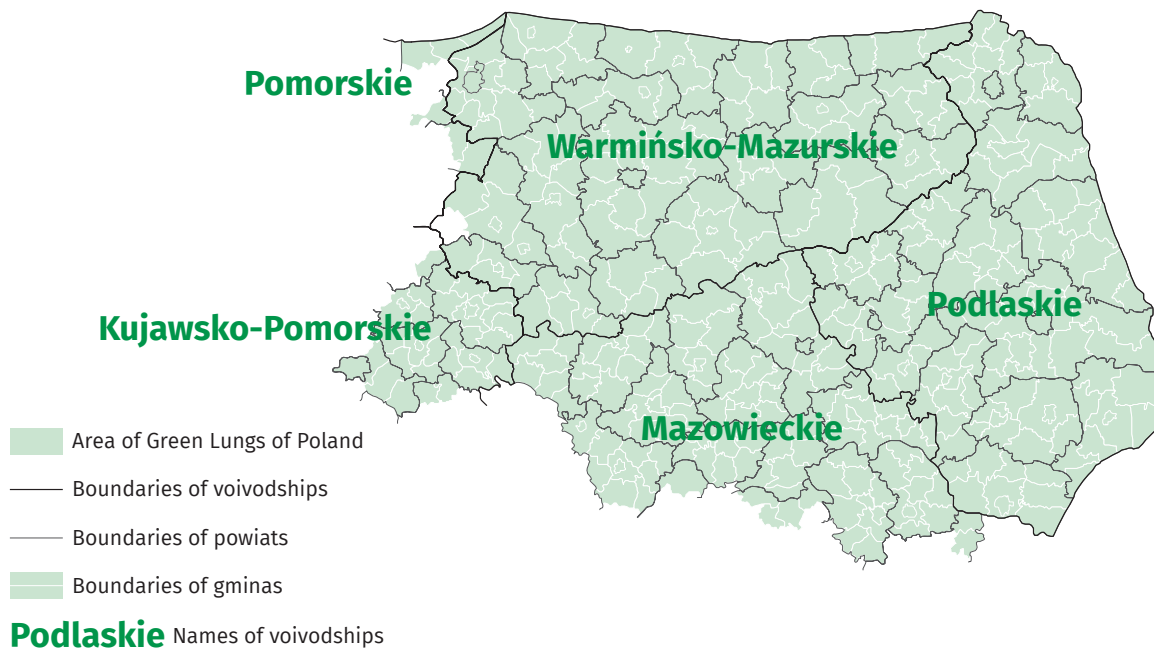
Green Lungs of Poland (GLP) comprise the north-eastern part of the country with the area of 63.2 thousand km², i.e. 20.2% of the total area of the country.

Map 1. Green Lungs of Poland against the background of the country in 2021
As of 31 December



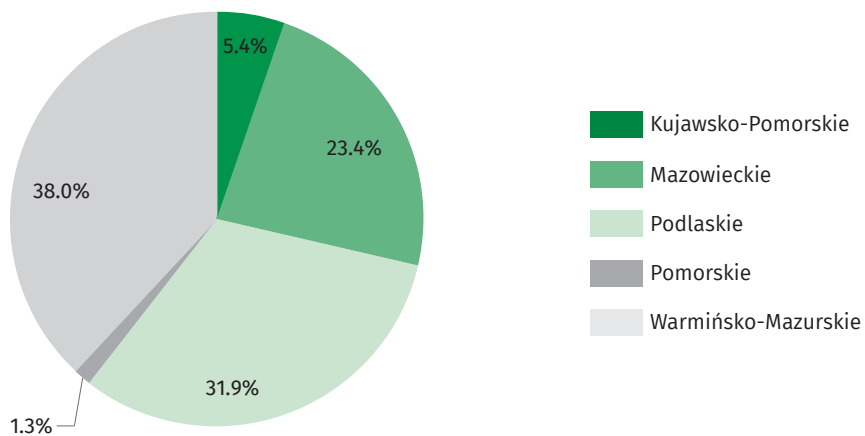
The ecoregion spans 386 gminas located within 5 voivodships: Podlaskie (118 gminas), Warmińsko-Mazurskie (115 gminas), Mazowieckie (114 gminas), Kujawsko-Pomorskie (33 gminas) and Pomorskie (6 gminas).

Map 2. Green Lungs of Poland in 2021
As of 31 December



The greatest area of Green Lungs of Poland is located in Warmińsko-Mazurskie Voivodship (24.0 thousand km², i.e. 38.0% of the total area of GLP) whereas the smallest – in Pomorskie Voivodship (0.8 thousand km², i.e. 1.3%).

Chart 1. Structure of total area by voivodships in 2021
As of 31 December

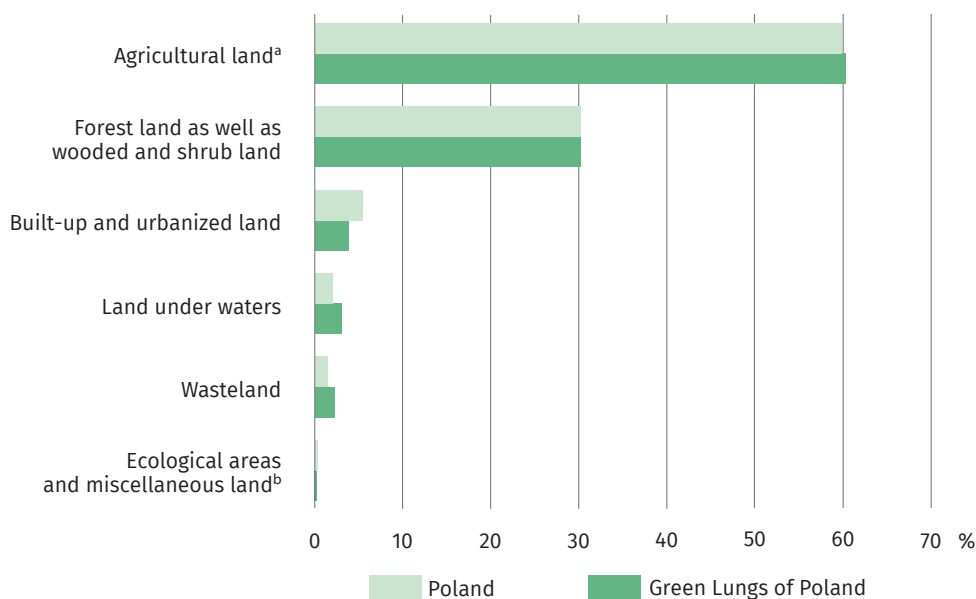


Chapter 2. Environmental protection. Forestry

Land use and protection of land surface

According to a geodesic register, at the beginning of 2021 agricultural land together with forest land, wooded and shrub land constituted 90.3% of the area of Green Lungs of Poland, while in the country – 90.4% of its total area. Agricultural land comprised 60.4% of the total ecoregion area (3827.0 thousand ha), while forest land together with wooded and shrub land – 29.9% (1889.5 thousand ha). In comparison with the data as of the beginning 2018, the GLP land use structure has not changed significantly.

Chart 2. Directions of land use in 2021
As of 1 January



a Including wooded and shrub land on agricultural land. b Land designated for reclamation and reclaimed land that is not managed, ramparts not suitable for road traffic.

Source: data of the Head Office of Geodesy and Cartography.

In 2021, 591 ha land (544 ha agricultural land and 47 ha forest land), i.e. 9.1% of the total of such lands was designated for non-forest purposes and non-agricultural purposes throughout Green Lungs of Poland. In relation to 2018, there has been growth in these areas in the ecoregion by 36.2%. 46.7% of the designated lands was allotted for building residential districts, and for industrial areas – 30.5%, for mining grounds – 4.9%, whereas 2.7% for roads and traffic routes.

At the end of 2021, there were 10.6 thousand ha of degraded and devastated land in GLP (in the country – 62.3 thousand ha), i.e. by 2.6% less than at the end of 2018. In the analysed year, 361 ha of land were reclaimed (mainly for agricultural purposes – 329 ha), and 42 ha were managed (of which 35 ha – for agricultural purposes).

Resources, consumption, pollution and water protection

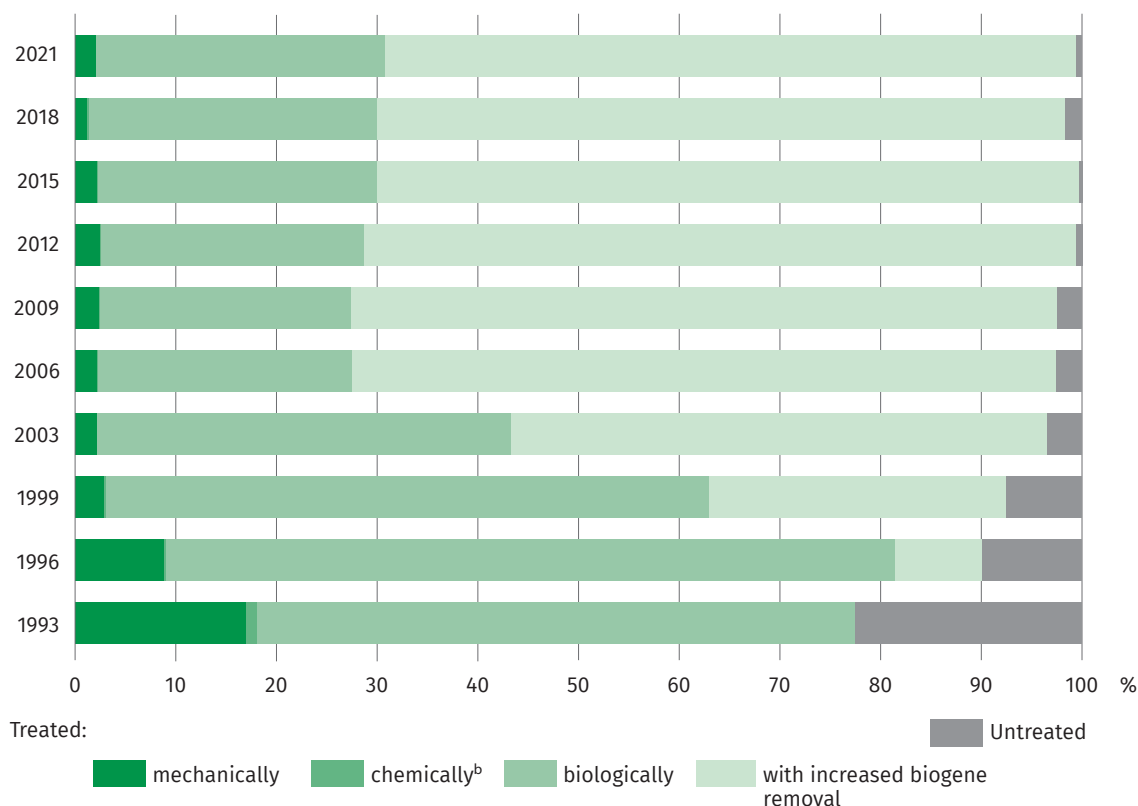
In 2021, water withdrawal for the needs of the national economy and population equalled 771,2 hm³, comprising 8.3% of the total water withdrawal in Poland. Water withdrawal in the ecoregion area was by 1.5% lower than the one noted in 2018.

In 2021, the majority of water was withdrawn in the GLP area for the needs of industry – 486.8 hm³ (or 63.1 % of total withdrawal) as well as for the exploitation of water supply network – 228.7 hm³ (29.6%). 56.6 hm³ (6.7%) of water was used for filling and replenishing fishing ponds.

In 2021, among cities belonging to the ecoregion the highest water consumption (reaching 438.6 hm³) was noted in Ostrołęka in Mazowieckie Voivodship and 99.6% of this water was designated for industrial purposes.

In the Green Lungs of Poland area in 2021 there were 585,9 hm³ of industrial and municipal wastewater discharged into waters or into the ground. They comprised 7.5% of the total such wastewater in Poland. Its amount grew by 4.5% in comparison with the amount recorded in 2018.

Chart 3. Structure of industrial and municipal wastewater^a requiring treatment discharged into waters or into the ground



^a Data from 2012 onwards are not strictly comparable with data for previous years due to changes in methodology of municipal wastewater survey ^b. From 2003 onwards, data regarding wastewater treated chemically concern only industrial wastewater.

In 2021, in the ecoregion area there was 25.8% (150.9 hm³) industrial and municipal wastewater requiring treatment (6.7% of wastewater of this type in the country). In relation to 2018 their amount rose by 1.1%. In 2021, almost all wastewater (i.e. 99.4%) in the GLP area was treated. The majority of it was treated in plants with increased biogene removal, i.e. fitted with highly efficient treatment technologies making it possible to increase the reduction of nitrogen and phosphorus. In 2021, the share of this wastewater in the total amount of treated wastewater in the GLP

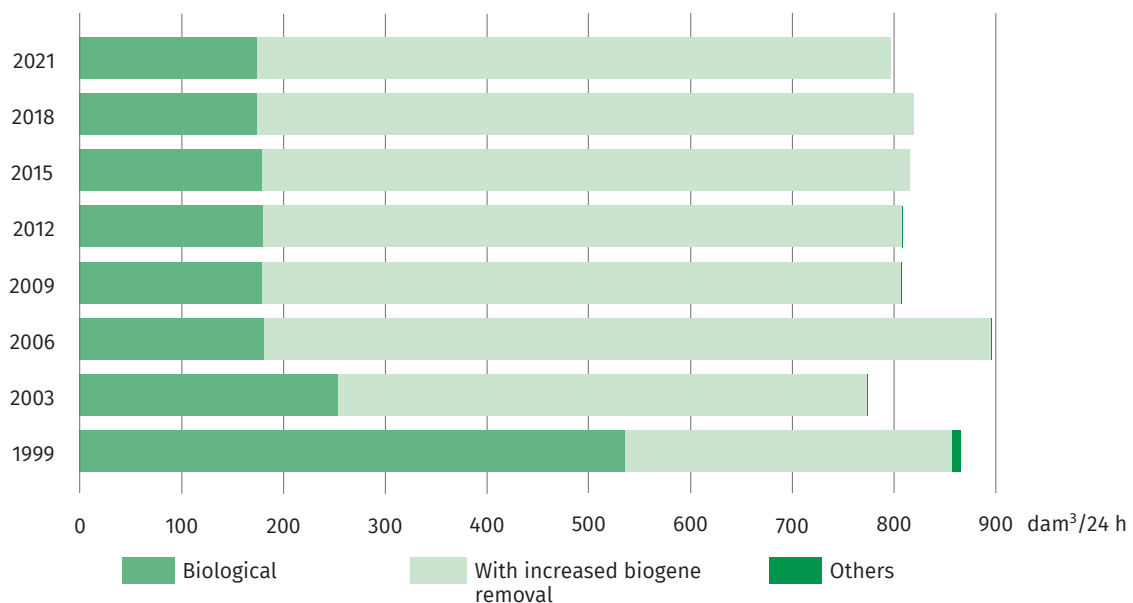
area made up 69.0%, wastewater treated biologically – 28.9%, mechanically – 2.0%, while chemically – 0.1%. Some wastewater requiring treatment did not undergo treatment. In 2021, the amount of untreated wastewater totalled 0.9 hm³ (i.e. 0.6% of wastewater requiring treatment) and was, as a whole, directly discharged from industrial plants. It comprised 0.7% of the total amount of untreated wastewater in Poland.

In 2021, in the GLP area 479.8 hm³ of industrial wastewater was discharged (i.e. 7.4% if the total of such wastewater in the country), of which 465.9 hm³ was discharged into waters or into the ground and 13.8 hm³ – by a sewage network. In comparison with 2018, the amount of industrial wastewater discharged increased by 5.2%, of which discharged to waters or into the ground – by 5.4%. In the analysed year there was 30.9 hm³ industrial wastewater requiring treatment and 97.1% was subjected to treatment. Wastewater treated biologically (57.3%) and the one treated with increased biogene removal (32.3%) prevailed in treated wastewater.

In 2021, in the GLP area there was 120.0 hm³ municipal wastewater discharged by sewage network into waters or into the ground (i.e. 8.8% of the total amount of municipal wastewater discharged in Poland). In 2021, in the GLP area all this wastewater was treated, of which 78.2% was treated with increased biogene removal and 21.8% biologically.

At the end of 2021, there were 509 municipal wastewater treatment plants in the ecoregion area (3276 in the country), of which 397 were biological ones and 112 with increased biogene removal. Their number grew by 10 since the end of 2018. Their total treatment capacity equalled 797.6 dam³ a day (while 3 years before – 815.8 dam³ a day).

Chart 4. Capacity of municipal wastewater treatment plants^a
As of 31 December



^a According to plans; operating on sewage network.

In the analysed period in the Green Lungs of Poland area municipal wastewater treatment plants produced 49.0 thousand tonnes of sewage sludge dry mass (i.e. this wastewater made up 8.4% of total sludge produced in Poland). In comparison with 2018 its amount fell by 2.3%. 36.8% of sludge out of the total mass was reused (mainly in agriculture) and 17.5% was temporarily landfilled. The amount of sludge collected in wastewater treatment plants area up to the end of 2021 amounted to 17.4 thousand tonnes of dry mass (i.e. 8.3% of the total of such sludge in the country). In relation to its amount recorded three years before its amount declined by 15.5%.

Air pollution and protection

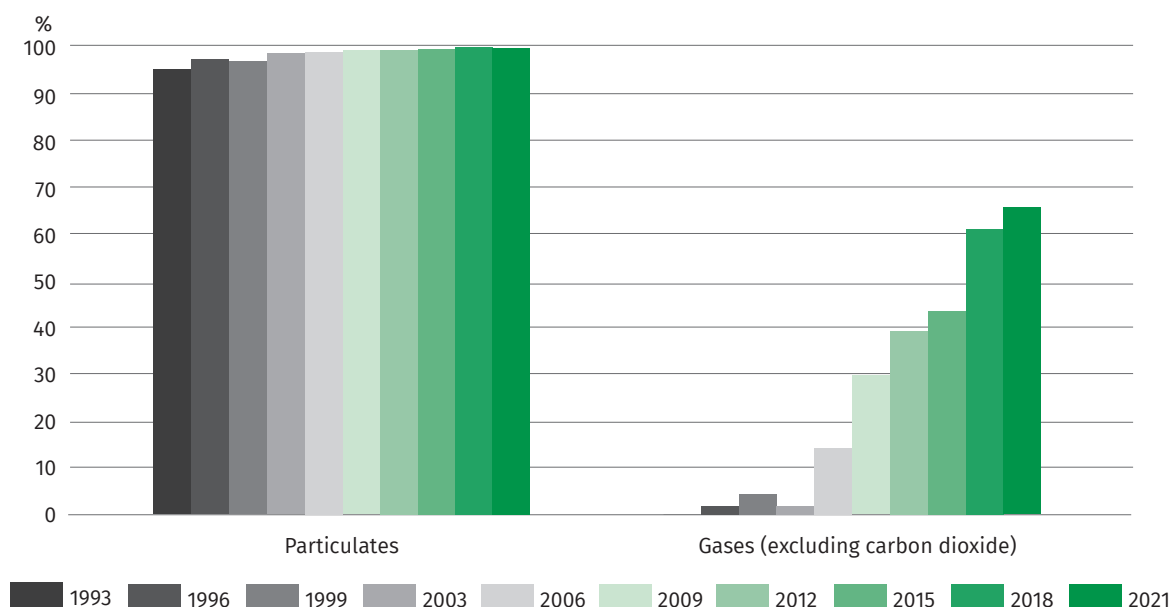
At the end of 2021, in the Green Lungs of Poland area there were 204 plants of particular nuisance to air purity (i.e. 11.1% of such facilities in Poland). In comparison with the end of 2018 their number decreased by 4. Pollutant reduction systems were installed in 121 plants (59.3% of the total), and only 29 (i.e. 14.2%) were equipped with systems to reduce gaseous pollutants.

Particulate pollutant emission 2021 in the area of Green Lungs of Poland was 1.6 thousand tonnes (7.4% of Polish emission) and in comparison with emission recorded in 2018 fell by 23.4%. A significant amount of particulate pollutants (equalling 72.5% of the total particulate pollutant emission in the GLP area) was from fuel combustion.

Gaseous pollutants emission (excluding carbon dioxide) in the analysed year reached 29.6 thousand tonnes (2.7% of domestic emission). It was by 1.2 thousand tonnes, i.e. by 3.8% lower than in 2018. Taking into consideration cities located in the area of Green Lungs of Poland, it was stated that in 2021 the greatest majority of gaseous pollutants (including carbon dioxide) was emitted by plants of particular nuisance located in Ostrołęka – 2635.5 thousand tonnes.

In the GLP area in 2021 by far the greatest amount of particulate pollutants generated by plants of particular nuisance for air purity, i.e. 99.5%, was retained by air pollutant reduction systems (in Poland – 99.9%). In the case of gaseous pollutants (excluding carbon dioxide) this ratio accounted for 65.5% (in Poland – 73.5%), which means that in relation to 2018 the particulate pollutant reduction fell by 0.1 pp, and in the case of gaseous pollutants – increased by 4.9 pp.

Chart 5. Air pollutants retained in pollutant reduction systems in plants of particular nuisance in % of pollutants generated



Renewable energy

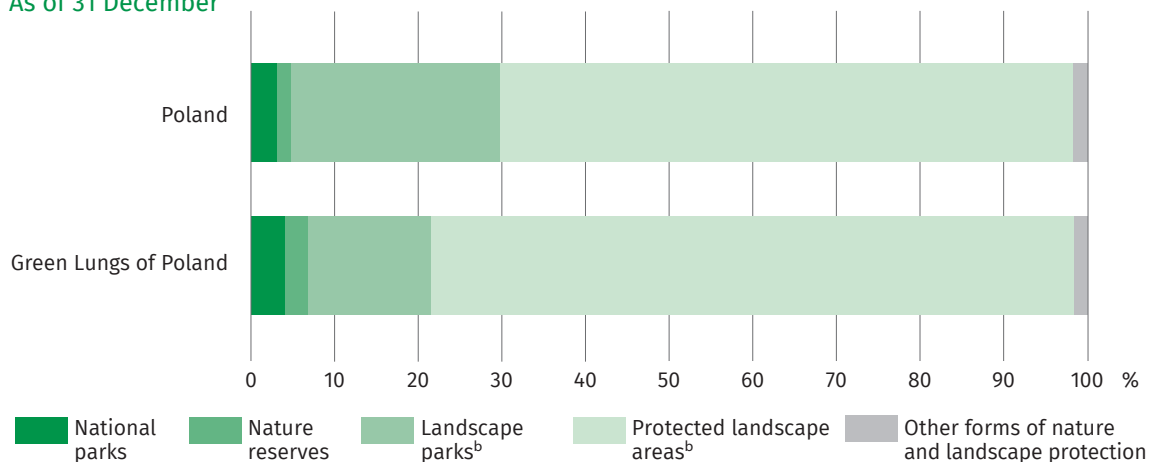
Energy from renewable sources is the energy derived from natural processes, being an alternative for traditional, non-renewable fossil fuels energy carriers. Its use makes it possible to reduce the pressure on natural environment by limiting the emission of harmful substances, and in particular greenhouse gases.

According to the the data from the Energy Regulatory Office, at the end of 2021 the total sum power of renewable energy sources installation systems in the area of Green Lungs of Poland totalled 1682.6 MW (i.e. comprised 14.5% of the total power of RES installed in Poland) and grew by 45,5% from 2018. In 2021, in the ecoregion area, and in the country alike, the greatest energy power installed concerned the wind RES installation (1052.2 MW and 7225.0 MW respectively).

Protection of environment and biodiversity

Establishing areas under legal protection is an important element of carrying out the policy of nature protection and it is a form of ecosystem protection against excessive anthropression. At the end of 2021, the area of special nature value under legal protection in the area of Green Lungs of Poland equalled 2236.4 thousand ha (while in Poland 10109.1 thousand ha), which was 35.4% of the total GLP area (in Poland – 32.3%). It grew in comparison with the state noted at the end of 2018 by 0.5 thousand ha. At the end of 2021, there were 5745 m² of the area under legal protection per capita in Green Lungs of Poland and this figure for Poland amounted to 2667 m².

Chart 6. Structure of the area of special nature value under legal protection^a in 2021
As of 31 December



a Data do not include information concerning the areas of Nature 2000 network, data include only these Nature 2000 network areas which are located within the boundaries of other areas under legal protection. b Excluding nature reserves and other forms of nature protection located within these areas.

National parks rank first in the category of legally protected forms of nature protection. At the end of 2021 in the Green Lungs of Poland area, there were 4 national parks with their area located completely within the boundaries of Podlaskie Voivodship. The area of these parks equalled 92.2 thousand ha with 16.7% under strict protection. National parks area comprised 29.3% of their total area in the country (1.5% of the total area of GLP). In relation to their size noted at the end of 2018, this area remained the same. The greatest share of the area of these parks in the ecoregion, namely 38.2%, fell into the category of forest land.

At the end of 2021, there were also natures reserves among areas under legal protection in the Green Lungs of Poland area. They equalled 61.3 thousand ha, i.e. 35.9% of their total area in Poland and 1.0% of the total area of Green Lungs of Poland. This area in the ecoregion area grew slightly in relation to the state recorded at the end of 2018.

At the end of December 2021, the area of landscape parks (excluding nature reserves and other forms of nature protection located within their area) in the area of Green Lungs of Poland amounted to 329.8 thousand ha, which comprised 13.1% of the area of landscape areas under legal protection in Poland and 5.2% of the total area of Green Lungs of Poland. In comparison with 2018 their area fell slightly – by 0.2%.

Protected landscape areas are the form of environmental protection that has the greatest share in terms of area in the ecoregion. At the end of December 2021, they covered 1714.8 thousand ha (excluding nature reserves and other forms of nature protection located within their area), which comprised 24.8% of the area of landscape areas under legal protection and 27.1% of the total area of Green Lungs of Poland. In comparison with 2018 their area fell slightly – by 1.0 thousand ha.

At the end of 2021, in the area of GLP there were 5640 monuments of nature (in Poland – 35043), with these as follows: single trees (4367), groups of trees (794), erratic boulders (300), alleys (125) and stones, grottos, caves and others (54). Their number decreased by 119 in comparison to the one noted three years earlier.

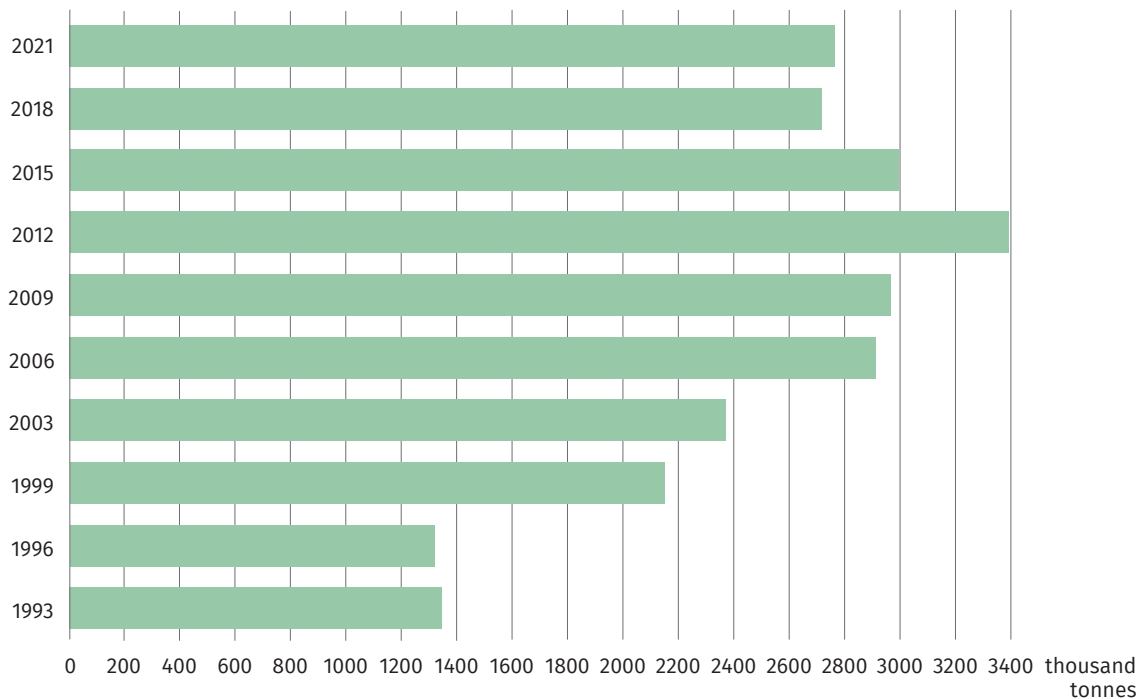
At the end of 2021, the area of strolling-recreational parks, lawns and green areas of the housing estate in the GLP area equalled 4512 ha, which was 7.2% of green areas of this type in Poland and 0.1% of the total of the ecoregion area. It was by 102 ha greater than three years before. The per capita ratio of such green areas in GLP amounted to 11.6 m². Their majority, i.e. 86.7% of the abovementioned green areas, was located in cities and comprised 1.7% of their area. Generally accessible green areas and green areas of the housing estate in the GLP urban area per capita equalled 87.5 m².

The brown bear, the Eurasian lynx, the gray wolf the European bison, the Eurasian beaver are species under legal protection whose life pursuits can result in damage in crops, forests, apiaries and livestock. In 2021, in the GLP area there were 3610 reported cases of damage caused by these animals, i.e. 49.2% of the total of such damage in Poland. It was by 163 cases more than in 2018. The majority of damage reported in the ecoregion was in caused by beavers (3043, i.e. 84.3% of all reported cases) and no case of lynx-caused damage was reported in this area. The State Treasury is hold responsible for damage caused by these animals. It was PLN 27.0 million paid in damages in the analysed year (in the country – PLN 34.2 million) and 88.9% of this amount was damages for beaver activity. The amount of paid damages in 2021 was by PLN 14.5 million higher than the one paid three years before. On average one reported beaver-caused damage cost PLN 7.9 thousand.

Waste

At the end of 2021, in the area of Green Lungs of Poland there were 197 plants generating waste (1836 in the country) and their number increased by 10 in relation to their number noted at the end of 2018.

In the ecoregion area in 2021, 2666.1 thousand tonnes of waste (excluding municipal waste) was generated, which constituted 2.5% of its total amount in the country. It means that in the GLP area there were by 43.8 thousand tonnes (by 1.7%) more waste generated in 2021 than in 2018.

Chart 7. Waste^a (excluding municipal waste)

a Generated during the year.

Out of the total amount of waste (excluding municipal waste) generated in the ecoregion in 2021, as much as 48.9% was transferred to other recipients and 48.5% was recycled by a waste producer on its own. In the analysed year, in relation to 2018, the amount of recycled waste doubled, while the amount of disposed waste diminished (by 74.9%) just like waste transferred to other recipients (by 30.5%) or temporarily landfilled (by 5.5%).

In 2021, in the GLP area the total of 1233.5 thousand tonnes of municipal waste was collected (of which 85.1% came from households), i.e. by 8.4% more than in 2018. It comprised 9.5% of its total amount in Poland. Year by year the structure of generated municipal waste is changing – the percentage of separately collected waste is increasing and the percentage of mixed municipal waste is decreasing. In the analysed year in GLP gminas the shares of these types of waste were 36.5% and 63.5% respectively (in 2018 – 22.9% and 77.1%).

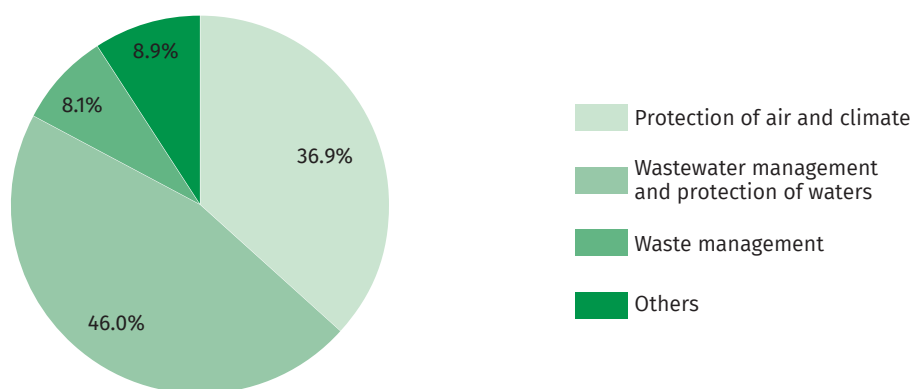
In the case of areas deprived of sufficient sewage infrastructure, some people use household sewage plants. They are septic tanks and household sewage plants. In GLP gminas, as noted with reference to 31 December 2021, the total of 316.9 thousand of such installations were in operation (in Poland – 2440.1 thousand), of which 82.3% comprised septic tanks. At the end of 2021, in comparison with the number representing the end of 2018, it can be stated that there was a fall by 0.4%. In 2021, septic tanks in the area of GLP provided 2439.4 dam³ liquid waste for collection, i.e. 7.7% of the total of such waste in Poland. The amount of liquid waste transferred in the GLP area rose by 236.9 dam³ (or 10.8%) in comparison with the one recorded in 2018.

In the case of household sewage plants a gradual increase was observed – from 47.5 thousand noted at the end of December of 2018 to 56.0 thousand recorded three years later. Household sewage plants located in the GLP area at the end of 2021 constituted a 17.7% share of the total number in Poland.

Economical aspects of environmental protection

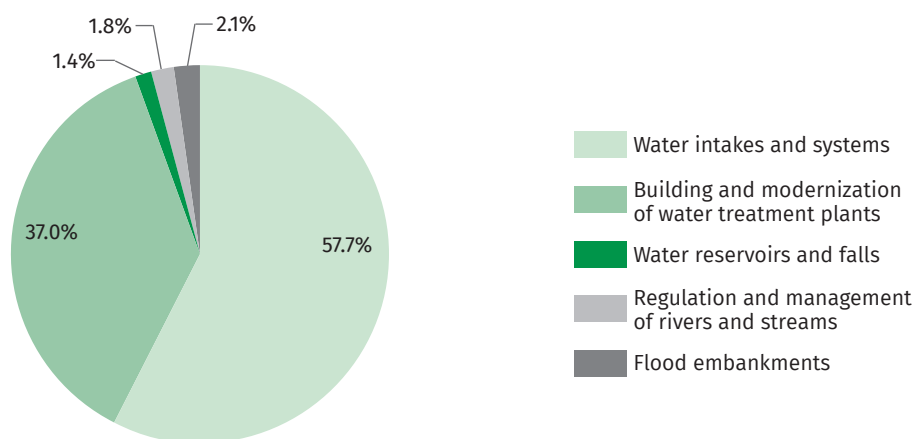
In 2021, in the Green Lungs of Poland area the amount of outlays on fixed assets on environmental protection amounted to PLN 1018.7 million and made up 8.2% of the total amount of these outlays in Poland. They were by 12.5% higher than in 2018. These outlays per capita equalled PLN 262 (in the country – PLN 326) and rose by 15.9% in relation to the ones noted three years before. While taking into consideration the directions of investment in environment protection, it is worth noting that wastewater management and water protection incurred most costs – PLN 468.6 million (46.0% of the total outlays on environmental protection in the GLP area) as well as the protection of air and climate protection – PLN 376.0 million (36.9%). In relation to 2018 the greatest increase in outlays on fixed assets on environmental protection was noted in the case of wastewater management (over twofold growth) and the protection of air and climate (by 42.6%).

Chart 8. Structure of outlays on fixed assets on environmental protection by directions of investment in 2021 (current prices)



In the Green Lungs of Poland area in 2021 there sum of outlays on fixed assets on environmental protection was PLN 229.7 million and their share in these types of outlays in Poland were 7.0% They fell by 11.1% since 2018. In the analysed year per capita outlays on water management per capita in Green Lungs of Poland were PLN 59 (while in the country – PLN 86). Three years before they amounted to PLN 64. Prevailing outlays in the structure of outlays on fixed assets on water management in the GLP area were costs of water intakes and water-pipe networks – PLN 132.5 thousand (57.7% of the total outlays in the ecoregion area) together with the ones on the construction and improvement of water treatment stations – PLN 84.9 thousand (37.0%).

Chart 9. Structure of outlays on fixed assets on water management by directions of investment in 2021 (current prices)



Taking into consideration the financing sources of investment in environmental protection and water management in the GLP area in 2021 it can be stated that they were mainly own funds (PLN 570.5 million and PLN 123.4 million). They represented respectively 8.4% and 7.8% of the total of such funds in Poland and they were by 22.7% higher than in 2018 in the case of financing the investment in environmental protection and by 9.8% lower than water management investment financing. Another significant investment financing source were foreign funds which, in the analysed year, in the case of investment in environmental protection, equalled PLN 243.6 million (12.9% of total funds designated for this purpose type in the country), whereas on fixed assets on water management – PLN 53.3 million (6.7%). In relation to 2018 there was an increase in foreign funds (respectively by 6.9% and 3.4%).

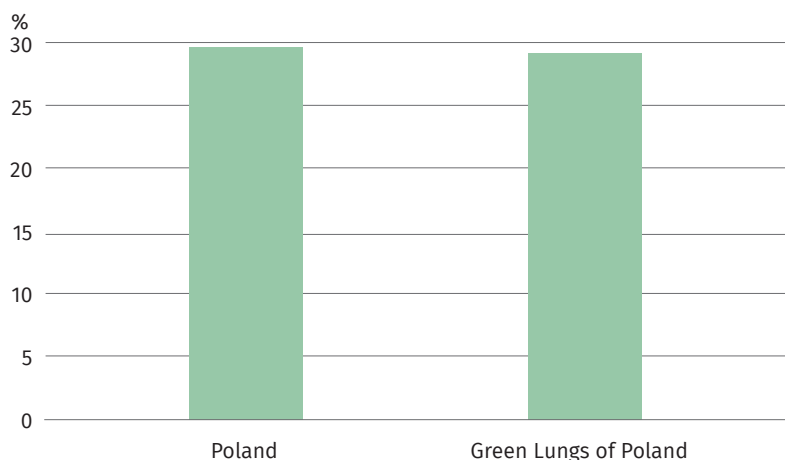
Tangible effects of investments in environmental protection in the Green Lungs of Poland area in 2021 include the construction of 241.6 km of sewage network discharging wastewater (in Poland – 3434.0 km) and 69.5 km of sewage network discharging precipitation water (in the country – 672.2 km). In relation to 2018 in the GLP area a fall in the length of built sewage network discharging wastewater was noted (by 38.2%; i.e. by 149.3 km) in the length of network discharging precipitation water by 38.2% (i.e. by 42.9 km). In the analysed year in the ecoregion area 2 new wastewater treatment plants with a treatment capacity of 3300 m³/24 hours were built (26 in the country), i.e. by 15 fewer than three years before. Water management investment in the GLP area in 2021 comprised 382.3 km of water network that was made available to population (in Poland – 2960.5 km), i.e. by 19.4% fewer than in 2018.

Forestry

As data of the end of 2021 show, the area of forest land in Green Lungs of Poland equalled 1876.4 thousand, accounting 19.8% of the total forest land in the country. In comparison with the end of 2018 this area grew slightly (by 0.1%). The ownership structure of forest land of the ecoregion showed a prevalence of public land comprising a 75.8% share (of which forest land managed by the State Forests – 73.1%).

At the end of the analysed year, like three years before, forest cover indicator in GLP was 29.1% (in Poland – 29.6%).

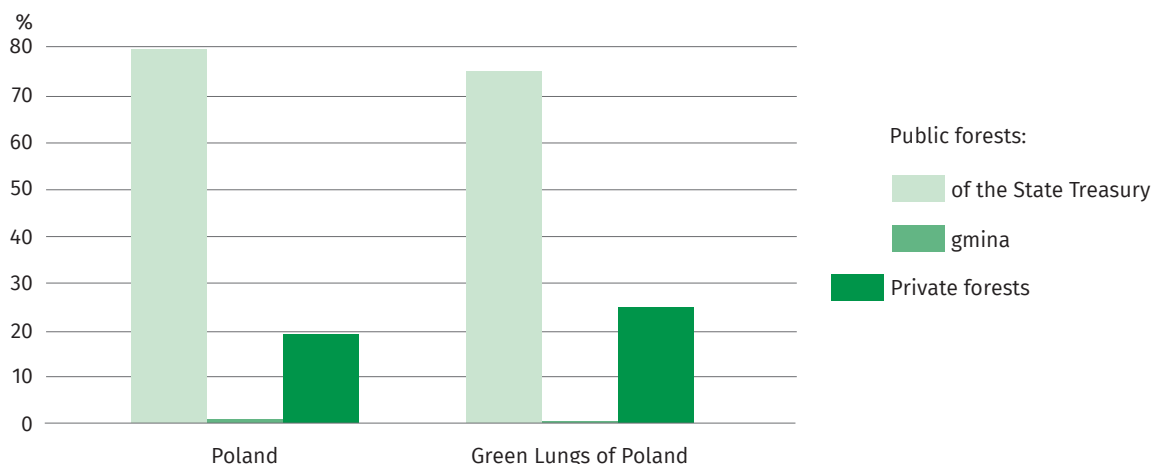
Chart 10. Forest cover in 2021
As of 31 December



At the end of 2021, forests in Green Lungs of Poland covered 1839.8 thousand ha, which represented 19.9% of the total forest area in Poland. In comparison with the end of 2018 there was a slight increase in forest area (by 0.1%) in the ecoregion area. The ownership structure showed a dominance of public forests, whose share in the total forest area in GLP made up 75.3%.

Chart 11. Structure of forest area by ownership forms in 2021

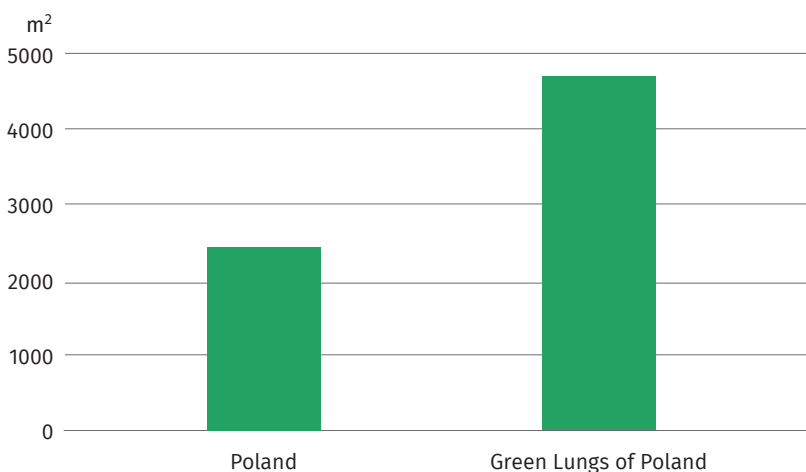
As of 31 December



At the end of 2021, forest area per capita in the ecoregion area amounted to 4743.2 m², while in the country – 2440,0 m².

Chart 12. Forest area per capita in 2021

As of 31 December



In 2021, in the Green Lungs of Poland area afforestation of non-forest land covered 109 ha (in the country – 627 ha), and afforestation was mainly recorded in private forests (56 ha).

Afforestation area diminished by 69.9% in comparison with the one noted 2018. In the analysed year 44.7 thousand trees (by 44.3% less than three years before) and 45.1 thousand bushes (by 67.2% less) were planted in the GLP area. Timber removals comprised 156.7 thousand m³, i.e. by 17.4% less than in 2018.

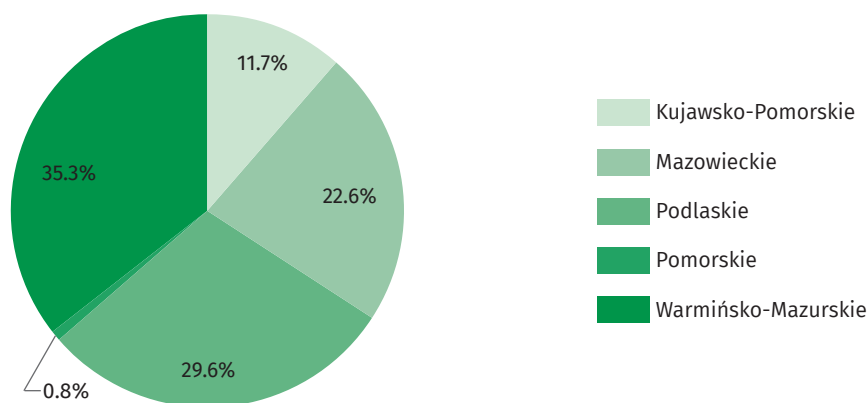
Chapter 3. Population

Size and structure of population

At the end of 2021, Green Lungs of Poland area was inhabited by 3878,7 thousand population. i.e. 10.2% of the total population of Poland. In relation to the values at of the end of 2018, the number of population residing in the GLP area fell by 129.2 thousand. The greatest majority of GLP population lived in Warmińsko-Mazurskie and Podlaskie Voivodships (respectively 35.3% and 29.6% of the total population).

Chart 13. Structure of population by voivodships in 2021

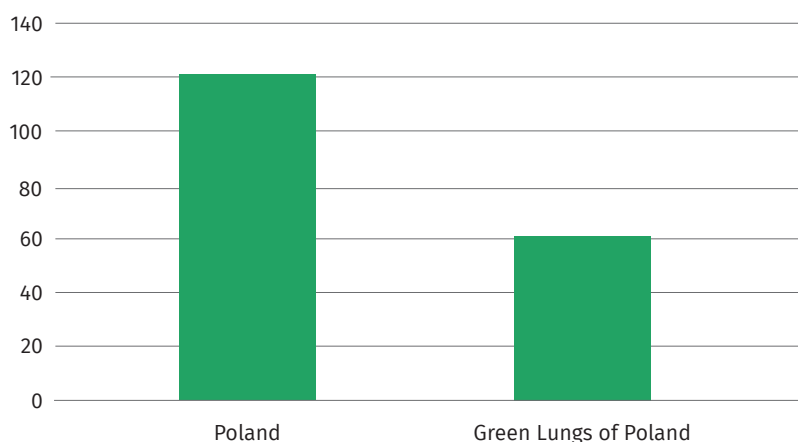
As of 31 December



At the end of 2021, the average density of population, i.e. the number of population per 1 km², was 61 in the Green Lungs of Poland area while this number for the country – 121.

Chart 14. Population per 1 km² in 2021

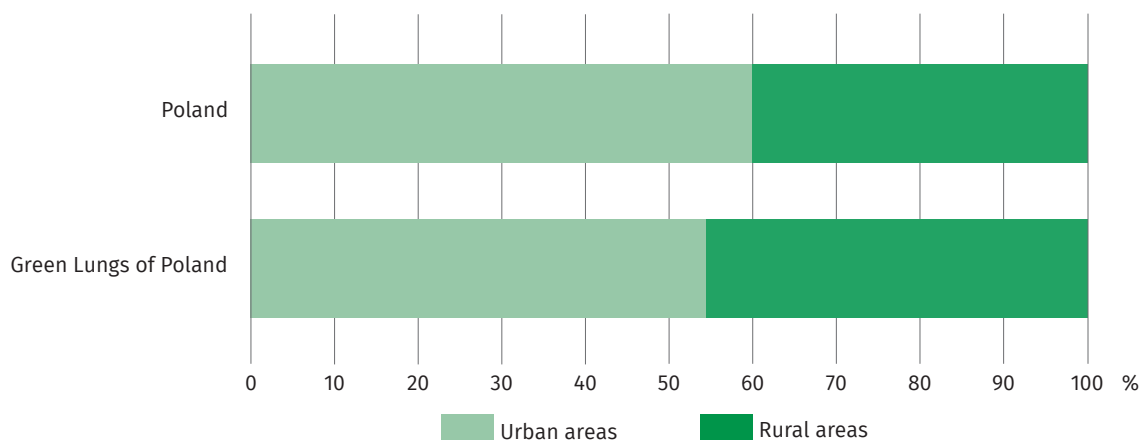
As of 31 December



Urban population of GLP at the end of 2021 amounted to 2115.9 thousand and comprised 54.6% of the total population of the ecoregion. Urban population of Poland, however, equalled 59.7% of the total population then. In comparison with the state at the end of 2018, the population of GLP urban areas fell by 2.9%. At the end of December of the analysed year, rural areas of Green Lungs of Poland had 1762.8 thousand residents, which means that the share of rural population of GLP was 45.4%, while the urban population share in Poland was 40.3%. The share noted three years before shows a 3.6% drop in rural residents of the ecoregion within this time.

Chart 15. Structure of population by place of residence in 2021

As of 31 December



The structure of population by sex in the area of Green Lungs of Poland at the end of 2021 resembled the one in the country. Women prevailed in the number of the total GLP population and their share amounted to 51.1% while in the country their share was 51.7% of the total population.

The analysis of the population structure by economic age groups shows that the share of population at working age in the total GLP population is diminishing and the share of post-working age population is growing. The share of children and youth aged 0–17 in the total population of Green Lungs of Poland at the end of 2021 was 18.7% (in Poland – 18.4%) and increased by 0.4 pp in relation to the one noted at the end of 2018. The percentage of working age population (women aged 18–59, men – 18–64) equalled 59.3% (in the country – 59.1%) and decreased by 2.3 pp in comparison with the one recorded three years before. The ratio of post-working age population (women aged 60 and more, men – 65 and more) in the total GLP population was 22.0% (in Poland – 22.5%) and grew by 1.8 pp in relation to the ratio noted at the end of 2018.

The relationship between each economic age group is shown by the age dependency ratio, which is the number of non-working age population per 100 working age population. At the end of 2021, this ratio in the Green Lungs of Poland area amounted to 69 (just like in the country), i.e. 32 for pre-working age population (31 in the country) and 37 for post-working age population (while 38 – in the country). At the end of 2018, this ratio reached 62 (30 for pre-working age population and 33 for post-working age population).

Vital statistics

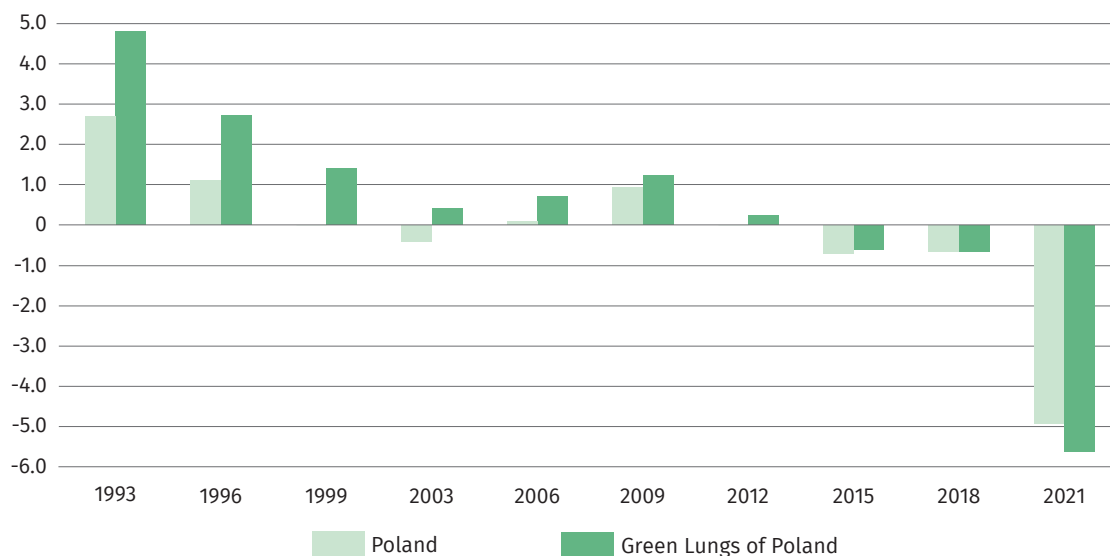
In 2021, in the area of Green Lungs of Poland there were 16.8 thousand newly-contracted marriages (which comprised 10.0% of all marriages registered in civil status offices in Poland and in comparison with 2018 there were by 15.3% less of them. The marriage ratio (the number of marriages per 1000 population) in the analysed period reached 4.33 in comparison with 4.43 recorded in the country. In 2018, the number of newly-contracted marriages per 1000 population in the GLP area was 4.95.

In 2021, there were 33.0 thousand live births in GLP gminas, i.e. 10.0% of all live births in Poland. The number of live births in the GLP area in relation to 2018 decreased by 17.8%. The live birth rate (the number live births per 1000 population) equalled 8.48 (or 8.73 in the country) and was lower than three years before, when it totalled 10.01.

In the analysed period, in the Green Lungs of Poland area 54.9 thousand people died, which made up 10.6% of the total number of deaths in Poland. In relation to 2018, their number in the GLP areas rose by 27.1%. The total death rate (the number of deaths per 1000 population) in the ecoregion area amounted to 14.10 (13.68 in the country), while three years before 10.76 represented the death rate.

In 2021, a negative increase was recorded in Green Lungs of Poland, just like in the country. The difference between the number of live births and deaths equalled respectively minus 21.9 thousand and minus 188.0 thousand. In 2018, the natural increase in the ecoregion area accounted for minus 3.0 thousand. The natural increase per 1000 population in 2021 equalled minus 5.62 (in Poland – minus 4.95), while in 2018 it amounted to minus 0.75.

Chart 16. Natural increase per 1000 population



Migration for permanent residence

In 2021, internal migration in the area of Green Lungs of Poland showed that 42.8 thousand population registered for permanent residence while 49.0 thousand people registered for departure from the place of permanent residence, i.e. by 6.1% and 9.4% respectively less than in 2018.

The inflow of people in the internal migration, while taking into consideration the place of residence of persons, shows that persons formerly residing in urban areas constituted a prevailing group – 53.7% of the total number of population. Similarly, the internal migration population outflow shows a trend also noted three years before, namely the tendency of moving to urban areas – 52.1% of the total population moving from the GLP area.

International migration for permanent residence in 2021 were as follows: from abroad to Green Lungs of Poland the influx equalled 1.4 thousand population, i.e. by 1.2% less than in 2018, while the one from the GLP area to foreign countries – 1.0 thousand population, i.e. by 12.2% less than three years before.

In 2021, the balance of internal and international migration for permanent residence in Green Lungs of Poland area was negative like three years before, which means that the number of people registered for departure from permanent residence within the analysed year exceeded the number of people registered for permanent residence (by 5.8 thousand; and in 2018 – by 8.2 thousand). It is worth noting that in 2021 in the area of Green Lungs of Poland there was a reverse trend than the one in Poland, where there was a positive balance of internal and international migration (totalling 3.4 thousand people).

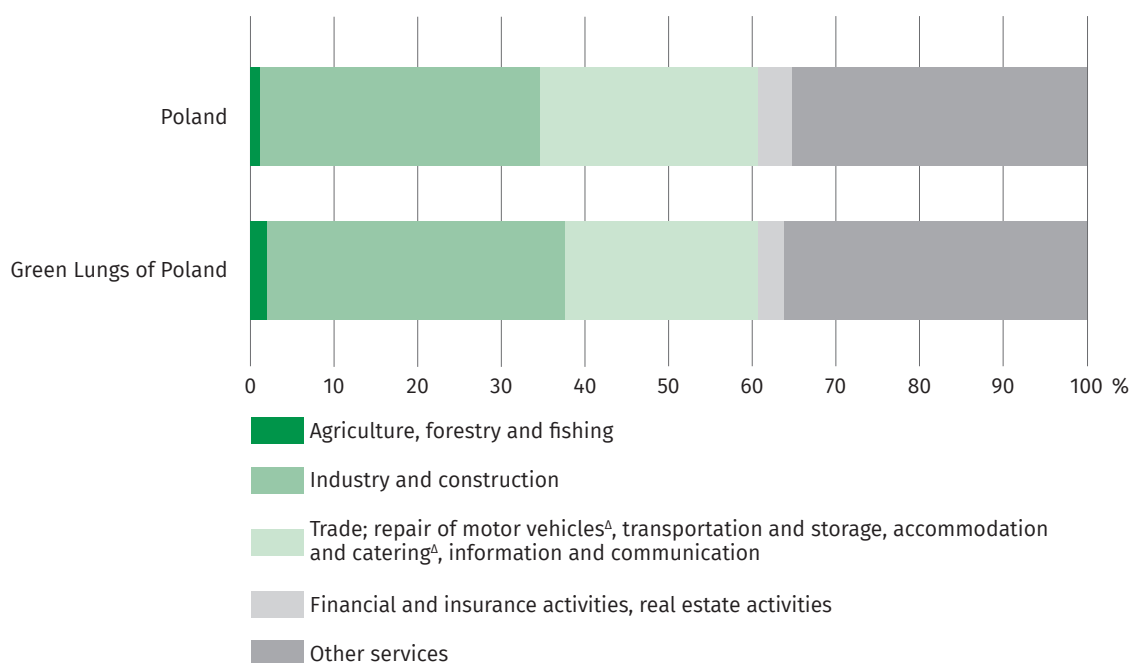
Chapter 4. Labour market

Employed persons¹

At the end of 2021, in the Green Lungs of Poland area there were 794.5 thousand persons, i.e. 8.1% of the total employed persons in the analysed group in the country. In comparison with the end of 2018 their number grew by 0.5% in the GLP area. As data of the end of 2021 show, there were 205 employed persons per 1000 ecoregion population, i.e. by 54 fewer than on average in the country.

In relation to the situation recorded three years before, the highest increase in the number of employed persons both in the GLP area and in the country was noted in such section groups as trade; repair of motor vehicles; accommodation and catering; information and communication; and it equalled 3.7% and 4.9% respectively. The greatest fall concerned employed persons in the ecoregion and in the country in terms of agriculture, forestry, hunting and fishing sections (by 9.2% and 10.5% respectively).

Chart 17. Employed persons in 2021
As of 31 December



In the ecoregion area at the end of December 2021 the highest share in the employed persons structure had the group of the employed in the following section groups: other services – 36,3% (three years before – 36.8%) as well as construction and industry – 35.7% (at the end of 2018 – 35.6%), while the lowest – in agriculture, forestry, hunting and fishing – 1.7% (three years before – 1.9%).

At the end of 2021, the persons employed in the Green Lungs of Poland area exceeded the one in the country in these types of activity: agriculture, forestry, hunting and fishing (by 0.8 pp), construction and industry (by 2.2 pp) as well as other services (by 0.8 pp).

¹ By actual workplace and type of activity; data concern entities of national economy employing 10 persons or more as well as persons employed in budgetary entities irrespective of the number of employed persons. Data exclude persons employed in individual farms in agriculture, clergy, persons employed in budgetary entities conducting activity within the scope of national defence and public safety as well as the ones working in foundations, associations and other social organisations.

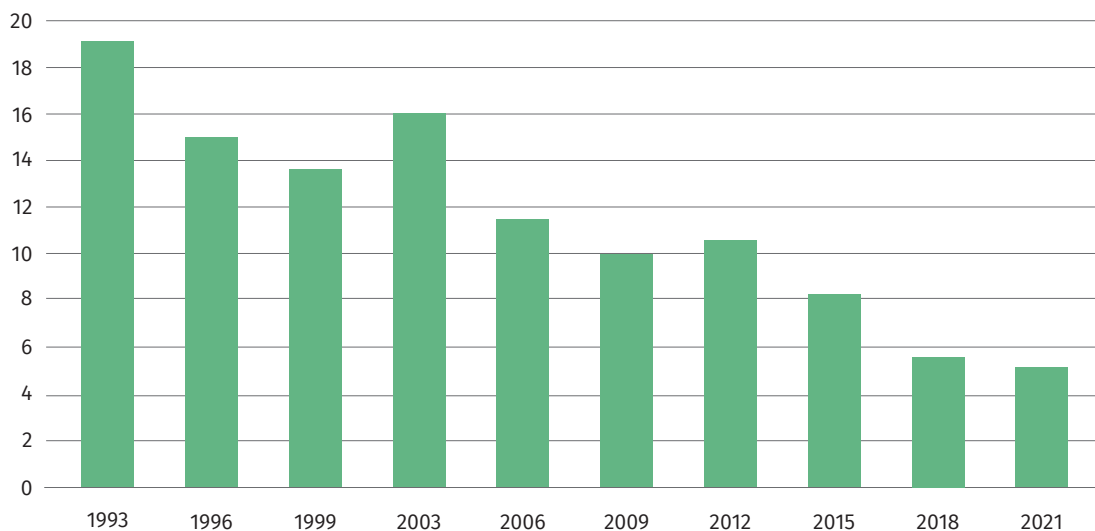
Registered unemployment

At the end of December 2021, there were 119.5 thousand unemployed persons registered in the Green Lungs of Poland area. They comprised 13.4% of the total registered unemployed persons in Poland. In comparison with their number noted three years before, the number of the unemployed in GLP gminas fell by 13.8%. The long term unemployed had a 57.6% share in group of the unemployed registered in the ecoregion area and among them persons over 50 years old constituted 26.5%, while persons aged up to 25 – 12.6%.

At the end of 2021, the share of unemployed persons in the total number of working age population was 5.2% in the GLP area (4.0% in the country) and it was by 0.4 pp lower than the one recorded three years before.

Chart 18. Registered unemployed persons per 100 working population

As of 31 December



Source: data of the Ministry of Family and Social Policy.

At the end of December 2021, in the GLP area, just like in the country, women prevailed in the group of the unemployed. They constituted 53.0% (53.8% in the country) of the total unemployed persons registered in powiat labour offices. Their share in the total number of the unemployed was by 1.7 pp lower than at the end of 2018.

Chapter 5. Dwellings. Municipal infrastructure

Dwelling stocks

At the end of 2021 in the GLP area there were 1508.1 thousand dwellings (i.e. 9.8% of the total number of dwellings in dwelling stocks in Poland), with their total usable floor space of 113.9 million m². Since the end of 2018, dwelling stocks have increased by 40.6 thousand dwellings (by 2.8%) and the increase in their usable floor space reached the level of 4.7 million m² (4.3%).

Within three years, an increase in the average usable floor space per dwelling was observed, both in the studied region and throughout Poland, with the increase being slightly higher in rural areas. At the end of 2021, the average usable floor space of a dwelling in the area of the Green Lungs of Poland was 75.5 m² and it was by 1.1 m² larger than three years earlier (in Poland – 75.1 m² and 0.9 m², respectively). The average usable floor space per person was also characterized by an upward trend. At the end of 2021, it amounted to 29.4 m² in gminas forming GLP (and increased by 2.2 m² in gminas forming GLP in comparison with the situation recorded at the end of 2018). The average usable floor space per person in the country was 30.4 m² and 2.2 m² respectively.

Dwellings completed

In 2021 in gminas belonging to GLP there were 21.1 thousand dwellings completed, i.e. 9.0% of their total number in Poland. In the ecoregion, comparing to 2018, there was a significant increase in their number – by 40.6%. In the analysed year, the majority (60.8%) of the discussed dwellings were built in urban areas (in Poland – 64.0%).

Dwellings completed per 1000 population equalled 5.4 in gminas belonging to GLP (6.2 in Poland), which is an increase in the level of the analysed indicator by 1.7 pp in relation to 2018.

In the analysed year, in the area of Green Lungs of Poland, mainly dwellings designated for sale or rent (54.9% of the total) as well as built by individual investors (42.0%) were completed. The situation was similar three years earlier, when the share of these two forms of construction was also dominant and amounted to 92.7% in total. In the structure of dwellings completed in GLP in 2021, other forms of housing construction, i.e. cooperative, public building society, municipal and company housing, accounted for: 1.5%, 1.1%, 0.4% and 0.2%, respectively.

Municipal infrastructure

At the end of 2021, in gminas belonging to the ecoregion Green Lungs of Poland, 3651.2 thousand people used the water supply network, i.e. 92.5% of the total population of the GLP and 10.4% of all users of this network in the country. This means a decrease in the number of water supply system users by 40.2 thousand people (by 1.1%), but an increase in the percentage of such population in the total number of inhabitants (by 0.4 pp) comparing to the situation recorded at the end of 2018. At the end of December 2021, the percentage of population using the water supply network in urban areas of the ecoregion it was 97.2%, and in rural areas – 86.9%.

At the end of 2021, in the area of Green Lungs of Poland, 2577.5 thousand people were served by the sewage network, i.e. 65.3% of the total the GLP population and 9.4% of the population using this network in the country. In the area of the ecoregion, there was a slight decrease in the number (by 0.3%), but at the same time an increase in the percentage (by 0.8 pp) of the population using sewage system comparing to the end of 2018. The share of the population using the sewage network in total number of inhabitants of urban areas in GLP was 92.7%, and in rural areas – 32.6%.

At the end of the analysed period, in the area of Green Lungs of Poland, the number of people using gas from gas-line system was 1387.7 thousand. They constituted 35.2% of the total population of GLP and 6.7% of all users of this system in the country. Comparing to the situation recorded at the end of 2018, the number of people using gas from the gas supply system increased by 4.1%, and its share in the total number of inhabitants of the ecoregion increased by 1.9 pp. The percentage of people using gas in urban areas in GLP reached 58.1%, and in rural areas – 7.7%.

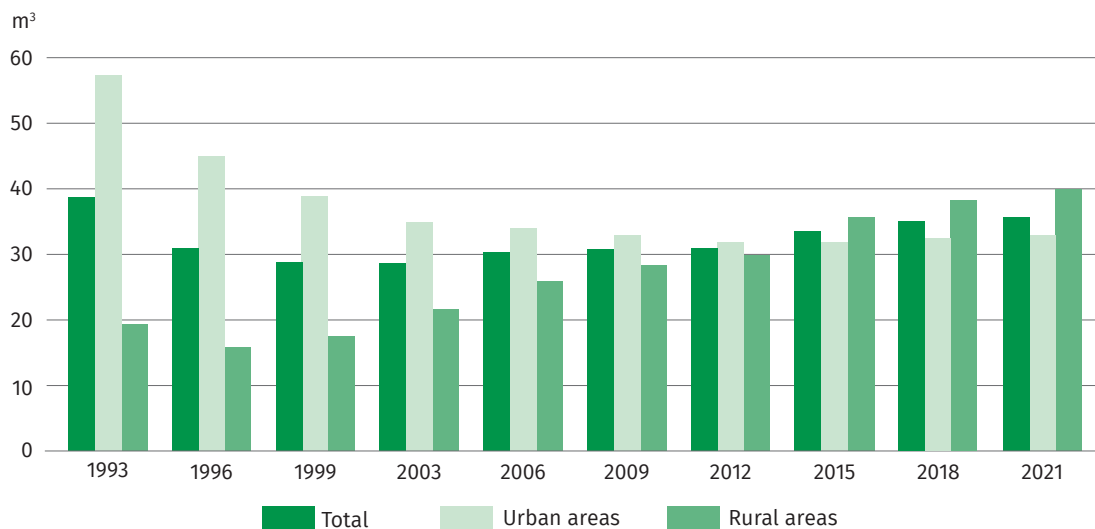
At the end of 2021, the share of the population using wastewater treatment plants in the total population living in the area of Green Lungs of Poland was 67.8% and it was by 7.4 pp lower than in the country, and comparing to the one recorded three years earlier, it increased by 1.0 pp. In urban areas belonging to GLP, 95.5% of the population used wastewater treatment plants, while in rural areas – 34.6%.

As of 31 December 2021, in the area of Green Lungs of Poland, the length of the water supply network was 52.5 thousand km, constituting 16.6% of the length of this network in the country, and the number of water supply connections – 670.6 thousand units, i.e. 11.1% of their total in Poland. Comparing to the situation at the end of 2018, the length of the water supply network in the ecoregion increased by 1.1 thousand km (by 2.1%), with a simultaneous increase in the number of connections leading to buildings by 33.2 thousand units (by 5.2%). The vast majority of the water supply network (86.8% of the total) and connections (67.9%) were located in rural areas. In the GLP area, the average density of the water supply network was 83.0 km/100 km² (in Poland – 101.3 km/100 km²), while the network density in urban areas was 305.1 km/100 km² and was much higher than in rural areas, where this indicator was 74.8 km/100 km².

As of the end of December 2021, the sewage network in the gminas belonging to GLP reached a length of 17.0 thousand km and accounted for 9.8% of the total length of the sewage network in Poland. The number of connections leading to buildings was 326.4 thousand units, i.e. 8.8% of their total number in the country. In the ecoregion, comparing to the end of 2018, the length of the sewage network increased by 1.0 thousand km (by 6.1%), with a simultaneous increase in the number of connections leading to buildings by 22.8 thousand units (by 7.5%). At the end of 2021, the density of the sewage network in GLP gminas was 26.9 km/100 km² (in Poland – 55.5 km/100 km²), with the ratio in urban areas reaching 294.5 km/100 km² and exceeding significantly the one in rural areas, where its value was 16.9 km/100 km².

In 2021, in the GLP area, water consumption from water supply systems in households per capita amounted to 36.0 m³ (in the country – 33.7 m³). Comparing to 2018, it increased by 0.9 m³. An indicator was higher in rural areas (40.0 m³) than in urban areas (32.8 m³), while in Poland the situation was the opposite (31.2 m³ and 35.3 m³, respectively).

Chart 19. Consumption of water from water supply systems in households per capita



Chapter 6. Education

In September 2021, there were 1603 primary schools for children and youth in the area of Green Lungs of Poland, which comprised 11.3% of the total of such schools in the country. In the 2021/22 school year primary schools provided education to 317.0 thousand children and youth or 10.2% of all students attending such schools in Poland. In the GLP area the number of these schools fell by 53, while the number of students attending them grew by 0.6% in comparison with the number of recorded three years before.

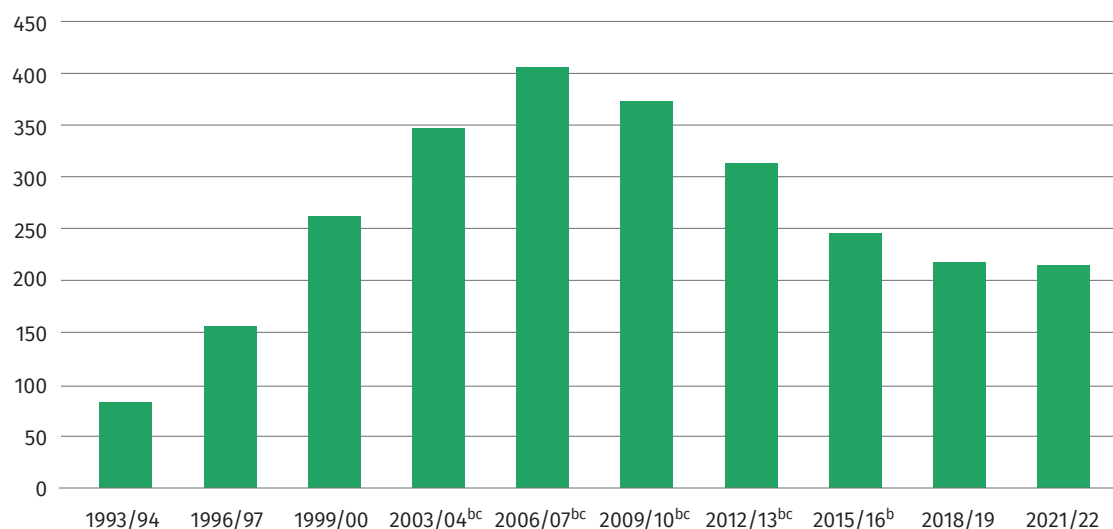
In September 2021, 754 schools operated in the Green Lungs of Poland area (6678 in the country) providing education to the total of 161.3 thousand students. Students of post-primary schools in the GLP area comprised 10.4% of the total number of students at this education stage in Poland. In comparison with the 2018/19 school year in the ecoregion area there were 40 establishments of this type more and the number of their students grew by 30.3%. In the 2021/22 school year among post-primary schools it was technical secondary schools and general schools of fine arts, with 71.0 thousand attending youth, that awarded professional certification. A significant group, amounting to 66.3 thousand persons, constituted a group of general secondary school students. In stage I and stage II sectoral vocational schools and special job-training schools there were 24.0 thousand youth.

Post-secondary schools complemented the range of schools at secondary vocational level. At the end of September 2021, there were 137 establishments carrying out educational activity in the Green Lungs of Poland area (while in the country – 1357). Their number diminished by 71 in comparison with their state noted three years before. At the beginning of the 2021/22 school year, post-secondary schools provided education to the total of 21.2 thousand students, i.e. 9.1% of the total of students attending such establishments in Poland. The number of students going to post-secondary schools located in the ecoregion area fell by 0.6% in comparison with the number recorded three years before.

In the 2021/22 academic year, there were there were 28 higher education institutions with their seat in the GLP area (i.e. 8.1% of their total number in the country) as well as 23 branches of higher education institutions with their seat outside the ecoregion area (respectively 13.9%). In relation to the 2018/19 academic year, the number of higher education institutions dropped by 3, while the number of branches located within this area grew by 4.

Chart 20. Students^a per 10 thousand population

As of 31 December



a Including foreigners. b As of 30 November. c Excluding higher schools of the Ministry of National Defence as well as the Ministry of the Interior and Administration.

At the end of December 2021, there were 82.6 thousand students (including foreigners) in the analysed institutions and they constituted 6.8% of the total of students in education in Poland. As regards the number of students in higher education in the Green Lungs of Poland area at the end of December 2018, it fell by 4.9%. The majority of them studied full-time and represented 69.4% of the total number of students.

In the Green Lungs of Poland area at the end of September 2021 there were 2379 pre-primary establishments, comprising 10.6% of the total pre-primary establishments in Poland. Their number in the ecoregion area fell by 17 in comparison with their number recorded at the beginning of the 2018/19 school year. There were 1145 nursery schools, 1045 pre-primary sections in primary schools, 166 pre-primary centres and 23 pre-primary education units among analysed establishments. There were 144.8 thousand children in GLP gminas attending pre-primary establishments, which was 9.8% of the total children in pre-primary establishments in Poland in the 2021/22 school year. The number of children in the facilities located in the ecoregion area in the analysed year grew by 7.7% within preceding three years.

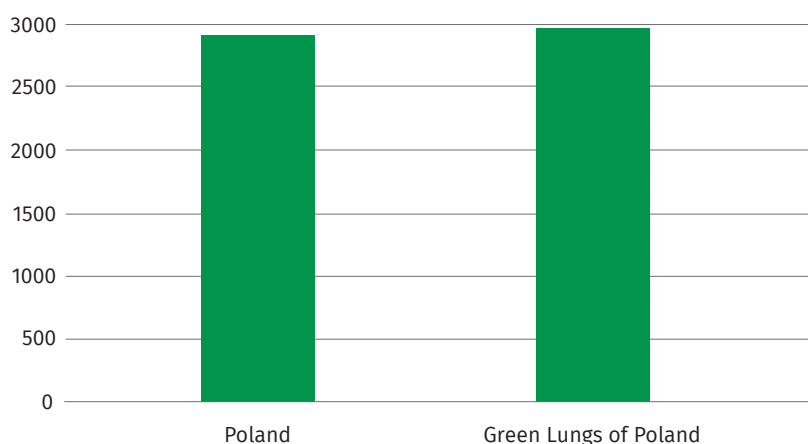
Chapter 7. Health care and social welfare

Health care

At the end of 2021, out-patient health care in the Green Lungs of Poland area had 2358 out-patient departments and 451 medical practices providing consultations within public funds. They accounted for 10.7% and 12.0% of their total number in the country. The number of out-patient departments in the GLP area grew by 3.5% in comparison with their number recorded at the end of 2018 and the number of medical practices fell by 28.8%.

In the ecoregion area at the end of 2021 there were 1302 generally available pharmacies and pharmaceutical outlets providing the services of selling medicines and medical supplies and such facilities comprised 10.0% of the total number of such places in Poland. Within three years in the GLP area the number of both generally available pharmacies and pharmaceutical outlets dropped by respectively 7.8% and 7.3%.

Chart 21. Population per 1 generally available public pharmacy and pharmaceutical outlet in 2021
As of 31 December



There were 2979 people per 1 pharmacy and pharmaceutical outlet located in Green Lungs of Poland gminas at the end of 2021 and it was by 139 persons more than in 2018. At the end of 2021, in Poland in the analysed period the number of population per 1 pharmacy and pharmaceutical outlet was by 197 higher and equalled 2913.

As of the end of 2021, there were in total 15.1 thousand places in establishments providing care to children up to the age of 3 located in the area of Green Lungs of Poland, which is by 43.9% more than at the end of 2018. The number of these places in nurseries and children's clubs comprised 7.9% of the total number of such places in the country.

Social welfare

At the end of 2021 in the Green Lungs of Poland area there were 239 social assistance centres, i.e. by 27 centres more than three years before. They represented 11.6% of the total stationary social welfare facilities institutions providing services within social assistance in Poland.

Stationary social welfare facilities in the GLP area, as of the end of 2021, had in total 14.0 thousand places (in Poland – 127.3 thousand places). Their number grew by 7.0% in comparison with the one noted at the end of 2018.

At the end of 2021, houses and facilities of social welfare located in the ecoregion area hosted 12.6 thousand residents (in the country – 114.3 thousand), i.e. by 1.8% more than three years before.

Chapter 8. Culture. Tourism

At the end of 2021, there were 862 public libraries (with branches) and 169 library service points in the GLP area. Their share in the total number of each establishment in Poland equalled respectively 11.2% and 20.1%. The number of public libraries and their branches in the ecoregion is falling gradually. At the end of 2018, there were by 24 (i.e. by 2.7%) fewer than three years earlier. The number of library service points, organised by communities themselves in holiday establishments or in regions with hindered access to a library or its branch also diminished (by 25, i.e. by 12.9%). The majority of libraries or their branches carried out their activity in rural areas (72.7%). As of 31 December 2021, library establishment collections had 13.6 million volumes, i.e. by 3.3% less than at the end of 2018.

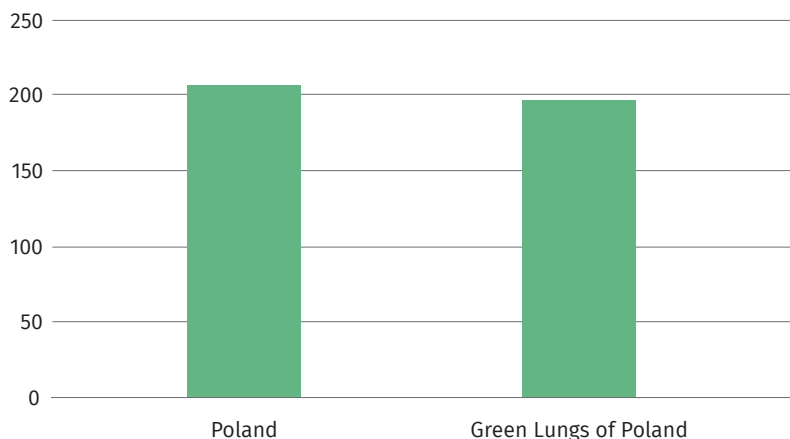
In 2021, in the GLP area there were 401.5 thousand registered library users. Their number in the total number of library users in the country amounted to 8.4%. In comparison with 2018 the number of library users diminished by 19.3%. There were 389 library users per library establishment in the ecoregion, i.e. by 174 fewer than on average in Poland. This number in urban areas of Green Lungs of Poland was over four times higher than in GLP rural areas.

As of the end of 2021, there were 107 museums and museum branches in operation in the GLP area, which comprised 11.4% of such institutions in the country. Their number grew by 1 in relation to their number in the ecoregion area recorded three years before. In 2021, museums and exhibitions were visited by 2018.0 thousand people (i.e. 8.0% of visitors in Poland), which is by 22.4% less than in 2018. The chance to see Polish national heritage free of charge is "The Long Night of Museums" organised each year. In the GLP area 17.7 thousand people (or 11.0% of this night's museum visitors in the country) made use of this opportunity of visiting a museum in this way in 2021.

As of the end of 2021, there were 54 indoor cinemas (in 2018 – 52) in the GLP area and they constituted a 10.3% share of the total number of indoor cinemas in the country. Indoor cinemas had 23.0 thousand audience seats, which is by 3.3% more than three years before. In 2021, there were 101.8 thousand screenings that were attended by 2039.0 thousand viewers and both of these figures were lower than the ones recorded in 2018 by respectively 37.9% and 53.4%.

As of 31 July 2021, there were 1050 tourist accommodation establishments (with 10 or more bed places) in the GLP area. They comprised 10.6% of the total of such establishments in Poland. Their number in the ecoregion area fell by 112 in relation to their state as of the end of July 2018. These establishments at the end of July 2021 had 76.7 thousand bed places (in Poland – 784.2 thousand), while three years before there were by 5.9 thousand bed places more.

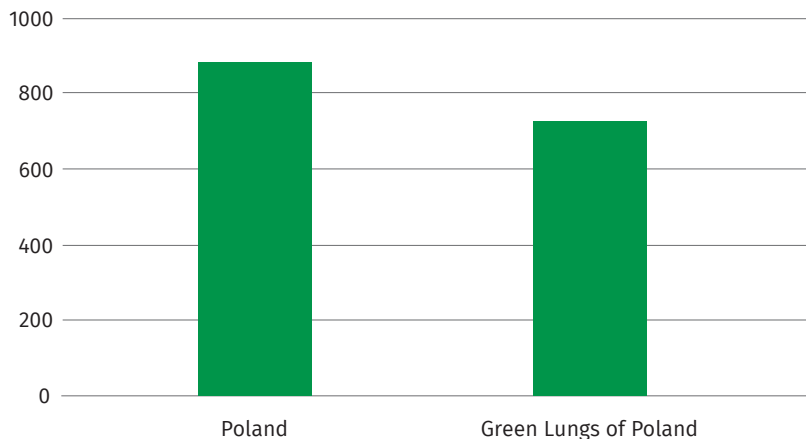
Chart 22. Bed places in tourist accommodation establishments^a per 10 thousand population in 2021
As of 31 July



^a Data concern establishments possessing 10 and more bed places.

In 2021, there were 1937.6 thousand tourists in tourist accommodation establishments located in the area of GLP, and their share in the total number of tourists accommodated in the country was 8.7%. A drop by 33.6% was noted in the number of tourists accommodated in comparison with data recorded in 2018. The majority of tourists, 64.5%, decided to stay in hotels and motels.

Chart 23. Tourists accommodated in tourist accommodation establishments^a per 10 thousand population in 2021



^a Data concern establishments possessing 10 and more bed places.

At the end of 2021, in gminas located in the GLP area there were 2532.2 km bicycle roads, i.e. 13.7% of their total length in the country. In the ecoregion area their length grew by 664.0 in comparison with the one noted three years before.

Chart 24. Length of bicycle roads^a As of 31 December



^a Excluding bicycle trails.

At the end of the analysed year there were 4.0 km bicycle roads per 100 km² of the total ecoregion area, while in the country – 5.9 km. In relation to the end of 2018 this indicator value grew respectively by 1.0 and 1.5 km. The length of bicycle roads per 10 thousand population residing in the GLP area at the end of December 2021 totalled 6.5 km, while in Poland – 4.9 km. In three years the indicator increased by 1.8 km and 1.3 km respectively.

General notes

Green Lungs of Poland cover the north-eastern part of the country. There are 386 gminas from the following voivodships: Podlaskie (118 gminas), Warmińsko-Mazurskie (115 gminas), Mazowieckie (114 gminas), Kujawsko-Pomorskie (33 gminas) and Pomorskie (6 gminas) included in the area of Green Lungs of Poland. A complete list of powiats and gminas in the area at the end of 2021 is presented in table II.

In the publication there was information regarding the area of Green Lungs of Poland however, in some cases (due to the lack of data on the gmina level) information concerned powiats, which are at least partially included in the mentioned area. Those tables are provided with appropriate notes.

Data presented in the publication, unless otherwise indicated, concern the **entire national economy**.

Data are presented according to the **Polish Classification of Activities – PKD 2007**, compiled on the basis of the Statistical Classification of Economic Activities in the European Community – NACE Rev. 2. PKD 2007 was introduced on 1 January 2008 by the Regulation of the Council of Ministers of 24 December 2007 on the Polish Classification of Activities (Journal of Laws item 1885, as amended).

In the Polish version of NACE Rev. 2 an additional grouping was introduced under the item:

- **industry** – sections: "Mining and quarrying", "Manufacturing", "Electricity, gas, steam and air conditioning supply" and "Water supply; sewerage, waste management and remediation activities",
- **other services** – sections: "Professional, scientific and technical activities", "Administrative and support service activities", "Public administration and defence; compulsory social security", "Education", "Human health and social work activities", "Arts, entertainment and recreation", "Other service activities" as well as "Activities of households as employers; undifferentiated goods-and-services-producing activities of households for own use".

Relative numbers (indices, percentages) are, as a rule, calculated on the basis of absolute data expressed with higher precision than presented in the tables.

In data **calculations per capita (1000 population etc.)** as of the end of the year, the number of population as of 31 December was used, whereas data describing the magnitude of a phenomenon within a year – as of 30 June, unless otherwise noted.

Due to the rounding of data, in some cases sums of components can slightly differ from the amount given in the item "total".

Statistical information originating from sources other than the Statistics Poland is indicated in the appropriate note.

More detailed information pertaining to particular fields of statistics can be found in subject matter publications as well as in the series "Statistical Research Methodology".

Methodological notes

Environmental protection. Forestry

Data regarding the **area of drainage areas** were obtained from the Hydrographic Map of Poland in the scale of 1:10000. The boundaries of Green Lungs of Poland (GLP) area adopted for the calculations were determined on the basis of the list of gminas included in GLP as well as electronic maps of the National Register of Boundaries.

Data regarding **geodesic status and directions of land use** were compiled on the basis of the land register introduced by the Regulation of the Minister of Development, Labour and Technology of 27 July 2021 on the register of land and buildings (Journal of Laws item 1390), prepared by the Head Office of Geodesy and Cartography.

Data regarding **agricultural and forest land designated for non-agricultural and non-forest purposes** concern land, for which payments and fees were collected, based on the Act of 3 February 1995 on Agricultural and Forest Land Protection (Journal of Laws of 2021 item 1326). Designation of agricultural land included in quality classes I–III as well as quality classes IV–VI comprised of organic origin soils and designation of forest land for abovementioned purposes requires a decision to allow such designation.

Data regarding **devastated and degraded land requiring reclamation and management** concern land which has completely lost its utility value (devastated land) and land with declined utility value due to worsened natural conditions or environmental changes and industrial activity as well as inappropriate agricultural practices (degraded land).

Reclamation of land consists in the restoration or assigning a utility or natural value to devastated or degraded land through appropriate landscaping, improving physical and chemical properties, regulating waterways, regenerating soils, strengthening scarps as well as reconstructing or constructing necessary roads. Reclaimed land is managed, i.e. used for agricultural, forest or other purposes.

Information regarding **water withdrawal** concerns:

1. In the item "for production purposes (outside agriculture, forestry, hunting and fishing)" – organisational units (including industrial livestock farming and crop production plants) making payments for the annual withdrawal of 5 dam³ or more of underground water, or 20 dam³ or more of surface water from their own sources, or discharging 20 dam³ or more of wastewater annually.
2. In the item "irrigation in agriculture and forestry as well as filling and replenishing fish ponds" – agricultural, forest and fishing organisational entities consuming water for irrigating agricultural and forest land of 20 ha or more in area, and for the purpose of exploiting fish ponds of 10 ha or more in area.
3. In the item "exploitation of water supply network" – until 1998 companies and plants supplying water established by the voivod and managed by local self-governments; since 1999 all entities supervising the work of the water supply network (including housing cooperatives, water companies, water service plants, workplaces etc.).

Information concerning the **quality of water withdrawn from water supply systems** is compiled in accordance with the Regulation of the Minister of Health of 7 December 2017 on the quality of drinking water intended for consumption (Journal of Laws item 2294), on the basis of results of laboratory tests conducted by the State Sanitary Inspection laboratories or other laboratories with a documented quality system of water analyses recognised by the State Sanitary Inspection.

Monitoring of water supply systems is conducted in points characteristic of a particular water supply system, agreed between the territorially competent state sanitary inspector and the water and sewage company.

Water supplied to the population for consumption is qualified as meeting or not meeting requirements specified in the abovementioned regulation on the basis of results of physicochemical, bacteriological and organoleptic tests.

Data regarding **wastewater** concern wastewater discharged into waters or into the ground by entities described on page 39 in information regarding water withdrawal (points 1 and 3).

Data regarding **industrial wastewater** concern wastewater discharged by entities described on page 39 in information regarding water withdrawal (point 1) which according to NACE Rev. 2 was presented in "Industry" including sections: "Mining and quarrying", "Manufacturing", "Electricity, gas, steam and air conditioning supply" and "Water supply; sewerage, waste management and remediation activities" as well as entities in other sections which participation in the amount of discharged wastewater is little. Data regarding water withdrawal relate to the same entities.

Industrial wastewater requiring treatment is understood as wastewater discharged by means of open channels or ditch systems directly into waters, the ground or sewage system from entities engaged in production (including polluted water from mine drainage and polluted water used in industry for cooling purposes).

Data on **municipal wastewaters** cover sewage discharged via a sewage network by the units managed by water supply and sewage companies and plants established by a voivode (or managed by territorial self-local governments) and all units supervising collective discharge of sewage via sewage network (including housing cooperatives, water companies, water service plants, enterprises etc.). Prior to discharge to the recipient, all the sewage should be treated, thus, in the statistics, the wastewater was included as the **wastewater requiring treatment**. This data do not include precipitation and infiltration water discharged through sewage network.

Cooling water means water used in production processes, mainly in heat and power generating plants, for cooling purposes. This is usually hot water which causes so-called thermal pollution of water.

Data regarding **wastewater discharged by sewage system** include wastewater discharged by system of covered canals being under management of companies and plants supplying water established by the voivod (or managed by local self-governments) as well as discharged by collective sewage system of voivodship water supply system, housing cooperatives and workplaces.

Data regarding **treated wastewater** concern wastewater treated mechanically, chemically, biologically and with increased biogene removal, discharged into waters or into the ground.

Municipal wastewater treatment plants cover all water treatment plants within a sewage network. The statistical survey do not include household wastewater treatment facilities or plants which treat only transported wastewater (wastewater treatment plants which operate outside the sewage system).

Since 2003 municipal chemical treatment plants have been classified as treatment plants with increased biogene removal or mechanical treatment plants.

Population Equivalent (P.E.) is a ratio of multiplicity of pollutant load in wastewater to individual load in wastewater discharged from one inhabitant during 24 hours (defined as BZT5 equals 60 g O₂/24 hours).

Sewage sludge from wastewater treatment plants are understood as sludge from sludge digesters and other installations, used for purifying wastewater.

Information regarding **emission and reduction of air pollutants** from plants of significant nuisance to air quality concerns units established by the Minister of Environmental Protection and Natural Resources on the basis of the defined amount of fees borne in 1986 for the annual emission of substances polluting the air, according to rates defined in the Regulation of the Council of Ministers of 13 January 1986, regarding payments for economic use of the environment and modifications to it (Journal of Laws item 40, as amended).

The established group of surveyed entities, maintained annually which among other things assures comparability of data, may only be increased in specific cases, e.g. by newly established or expanded entities with a high threshold of pollutant emission.

Data regarding **emission of particulate pollutants** concern: particulates from the combustion of fuels, particulates from cement and lime, fire-resistant materials, silicates, artificial fertilizers, carbon and graphite, soot as well as other types of particulate pollutants.

Data regarding **emission of gaseous pollutants** concern: sulphur dioxide, carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons as well as other types of gaseous pollutants.

Data regarding emission of particulate and gaseous pollutants include organized emission (from technological and heating facilities) and non-organized emission (from waste dumps and landfills, in the course of reloading of volatile or loose substances, from production halls etc.).

Data regarding **amount of retained and neutralized particulate** and gaseous pollutants illustrate the scale of pollution reduced by air protection devices installed in the plants recognized as particularly harmful to the atmosphere.

Indicator of particulate (gaseous) pollutants reduction expresses percentage ratio of the amount of particulate (gaseous) pollutants retained by cleaning devices to the total amount of generated particulate (gaseous) pollutants. The closer to 100% the index is, the higher and better operating efficiency of the protective potential of the plant is as well as the lesser the nuisance to air purity.

Due to the high absolute values which characterize the emission of carbon dioxide, the indicator of reduction of gaseous pollutants was calculated and presented excluding carbon dioxide emission.

Nature protection consists in maintaining, sustainable use and renovation of nature resources, objects and elements (among others, plants, animals and fungi originally existing in environment as well as subjected to species protection, wandering and migratory animals, habitats); forms of nature protection are: national parks, nature reserves, landscape parks, protected landscape areas, documentation sites, ecological areas, landscape-nature complexes, Natura 2000 areas, monuments of nature, plant, animal and fungi species protection.

The legal basis regulating establishing forms of nature protection is the Act of 16 April 2004 on the Nature Conservation (Journal of Laws of 2021 item 1098).

National parks include protected areas distinguished for particular natural, scientific, social, cultural and educational values, of the area of at least 1000 ha, where all nature elements and specific landscape features are protected. National parks are created to preserve biodiversity, resources, formations and elements of inanimate nature and landscape features, restore a proper state of resources and elements of nature, reconstruct distorted natural habitats of plants, animals or fungi.

Nature reserves include areas in natural or slightly changed state – ecosystems, refuges and natural sites. They also protect habitats of plants, animals, fungi and formations and elements of inanimate nature having essential value for the environmental, scientific, cultural and landscape reasons.

Landscape parks are areas protected for natural, historical and cultural values, as well as for landscape features. The aim of landscape park's creation is preservation, popularisation and dissemination of these values in conditions of sustainable development.

Protected landscape areas include areas protected for the sake of distinguishing landscape characterised by various ecosystem types. These areas are valuable due to their functions satisfying the needs of tourism and recreation and functions of ecological corridors.

Ecological areas are worth protecting fragments of ecosystems of significant importance for biodiversity, such as: natural water reservoirs, field and forest ponds, groups of trees and shrubs, swamps, peat bogs, dunes, rock outcrops, scarps etc.

Documentation sites are scientific and educationally important, not emerging on the earth surface or visible on the surface, places of occurrence of various geological formations, fossils accumulations, mineral objects, caverns, rock caves, exploited and discarded opencast and underground workings.

Landscape-nature complexes are fragments of natural and cultural landscape that are worth protecting due to their scenic or aesthetic features.

Natura 2000 network includes Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) that until the creation by way of national law act are Sites of Community Importance (SCIs). The legal basis for its functioning are: Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds, that specifies the criteria to designate and manage special protection areas for endangered bird species as well as the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, that specifies the rules of protection of the rest of the animal and plant species as well as natural habitats and the procedures of protection of especially important natural areas.

Special Protection Areas of birds (SPA) are the sites established according to the EU regulations for the protection of population of wild birds of one or more species, where the birds enjoy favourable conditions throughout their entire lifecycle, at any stage of their growth.

Special Areas of Conservation of habitats (SAC) are sites established according to the to the EU regulations for the preservation of natural habitats or populations of endangered plant and animal species or for the purpose of restoration of a proper condition of natural habitats or proper condition of protection of these species.

Special Protection Areas and Special Areas of Conservation can overlap with each other and with other forms of nature protection, either in part or in whole.

Monuments of nature are single objects of animate and inanimate nature of special environmental, scientific, cultural, historical or landscape value and of distinctive individual features such as trees of impressive size, native and alien bushes, sources, waterfalls, exsurgents, stones, ravines, erratic boulders and caves.

Strolling-recreational parks are green areas with high and low growing plants, at least 2 ha in size, maintained for the recreational needs of the population, featuring roads, walkways, benches, playgrounds etc.

Lawns are areas of less than 2 ha in size, in which recreational activity dominates.

Green areas of housing estates are located in residential areas and are used for the purposes of recreation, isolation and aesthetic visual appearance.

The payment of compensation for **damages caused by legally protected animals** is carried out under Art. 126 of the Act of 16 April 2004 on the Nature Conservation (Journal of Laws of 2015 item 1651, as amended). Under that law, the State Treasury is responsible for damages caused by bison, wolves, lynxes, bears, beavers. For an estimation of damages caused by animals of protected species are responsible the Regional Directorates for Environmental Protection.

Waste means any substance or object which the holder discards or intends, or is required to discard. Data on waste since 2013 have been compiled on the basis of the Act of 14 December 2012 on Waste (Journal of Laws of 2021 item 779, as amended).

Types of waste presented are consistent with the waste catalogue introduced by the Regulation of the Minister of the Climate and Environment of 2 January 2020 (Journal of Laws item 10).

Waste producer is any person whose activity or residence generates waste and anyone who performs preliminary processing, mixing or any other activity causing a change in the nature or composition of waste.

Information regarding quantity and type of waste concerns plants which generated over 1 thousand tonnes of waste in the course of the year or accumulated 1 million tonnes of waste and more (excluding municipal waste).

Recovery of waste shall mean any operation the principal result of which is waste serving a useful purpose by replacing other materials. Full definition of waste recovery is included in the Act of 14 December 2012 on Waste.

Disposal of waste shall mean any operation which is not recovery even when the operation has as a secondary consequence the reclamation of substances or energy.

Thermal transformation of waste is understood as waste burning by oxidation as well as other processes, of which gasification, plasma process, pyrolytic decomposition, led in appropriate installations or devices (i.a. waste incineration plants) in accordance with rules specified in detailed regulations.

Landfilled waste is understood as waste transferred to landfill sites (landfills, waste dumps and sludge tanks) of the plant generating it or to other areas.

Waste storage means a temporary waste accumulation, which includes: preliminary storage of waste by its producer, temporary storage of waste by the unit collecting waste, storage of waste by the unit processing waste.

Data regarding **landfilled up to now (accumulated) waste** concern the quantity of waste deposited on the grounds of plants generating it as a result of depositing it during the reporting year and previous years.

Reclaimed storage areas are understood as areas which exploitation was finished and in which restoring or assigning their utility works were performed through, i.a. appropriate landscaping, improving physical and chemical properties, regulation of waterways.

Data on **municipal waste** concern waste generated by households (excluding discarded vehicles) as well as waste not containing hazardous waste originating from other producers of waste, which because of its character or composition is similar to waste from households.

Data on **liquid waste** concern waste, removed to wastewater treatment plants or dump stations, which comes from households, public buildings and buildings of units conducting economic activity – in the case they are not discharged by sewage system.

Septic tank is an installation and device intended for an accumulation of liquid wastewater where is generated.

Independent wastewater treatment facility is a complex of devices intended for treatment of sewage produced in one or more households.

Investment outlays are financial or tangible outlays the purpose of which is the creation of new fixed assets or the improvement (rebuilding, enlargement, reconstruction, conversion or modernization) of existing capital asset items as well as outlays on the so-called initial investments. Investment outlays are divided into outlays on fixed assets and other outlays.

Data regarding **outlays on fixed assets and tangible effects of investments in environmental protection and water management** are presented in accordance with the Polish Statistical Classification of Environmental Protection and Facilities, introduced on the basis of the Regulation of the Council of Ministers of 2 March 1999 on the Polish Statistical Classification of Environmental Protection and Facilities (Journal of Laws item 218).

Investments connected with air and climate protection include installations of purifying and deodorizing devices (dusting off, reducing, neutralizing and treating gaseous pollution) as well as those with the use of reaction of chemical transformation for substances less harmful to the environment and also complete equipment and auxiliary devices assuring correct exploitation, devices and apparatus assuring decrease in amount or in concentration of produced and emitted pollution, tasks connected with providing in contro-measuring apparatus for air pollution. Moreover, there were also included: new techniques and technologies of fuel combustion, modernization of boiler houses and thermal power stations in order to limit air pollution generated during combustion process, unconventional energy sources (e.g. wind power stations, utilization of geothermal waters), adjustment of interna-combustion engines to gas fuel as well as construction of hydrocracking complex. Investments do not include devices reducing pollutants which are integral part of technological process assuring suitable quality of new materials and semi-manufactured articles for following stages of production. It also refers to installing every kind of auxiliary devices indispensable for technological or scientific reasons of production plants.

Investments connected with wastewater management and protection of waters include devices for neutralizing and treating industrial and municipal wastewater, precipitation water (wastewater) as well as polluted mining water discharged directly into surface waters or into the ground. This category includes: wastewater treatment plants or parts thereof by wastewater treatment technologies (mechanical, chemical, biological with an increased degree

of treatment, as well as independent wastewater treatment facilities and investments referring to pre-treatment of wastewater), equipment for use of wastewater in agriculture (forest management), for disposal, storage and transport of brine, for wastewater collection as well as installation of control and measurement equipment at wastewater treatment plants, if they are not included in the costs of construction of wastewater treatment plants. Data also include: construction of sewage network discharging wastewater into wastewater treatment plants as well as precipitation water, devices for reshaping and managing sludge from wastewater treatment plants, creating protection zones of water sources and intakes etc.

Investments connected with waste management, protection and recovery of soils, protection of underground and surface waters include:

- actions connected with pollution prevention by modification of technological processes, of which new low-waste and waste-free techniques and technologies,
- collection (of which selective) of waste and its transport,
- actions connected with waste recycling,
- devices for processing and managing sludge from wastewater treatment plants,
- economic utilization of waste, i.e. devices as well as methods and manners resulting in clear and quantitative reduction of waste generated or accumulated on landfill sites, e.g. utilization of waste to the construction of road and rail embankments, mine filling as well as utilization and waste processing by industrial plants,
- waste treatment, i.e. methods and manners resulting in reduction of waste harmfulness to the environment, i.e. reduction of pollutant load discharged with waste into ground surface layers, of which construction and organization of landfill sites as well as sludge tanks for waste in ground surface layers, organization of protective zones around landfill sites, treatment protecting against dusting of landfill sites,
- reclamation of landfill sites, waste dumps, landfills and sludge tanks as well as other devastated and degraded areas, which includes the stage of finished biological reclamation or transfer of reclaimed area to management,
- actions connected with preventing the soil against degradation and devastation, actions connected with benching and levelling soil unevenness, antierosional plantings as well as removal of effects of erosion,
- construction and managing of devices for neutralization of soil pollution (contamination), underground waters treatment as well as protecting against infiltration (penetration) of waste into the ground and into underground waters,
- providing with contro-measuring apparatus for waste management, soil, underground and surface waters protection.

Investments connected with water management include:

- construction of intakes of surface, underground and mining water including treating devices as well as water main and distribution network (intakes, wells, water treatment plants, filters, pump stations, supplying water supply system – excluding connections to buildings and households), construction of water quality control laboratories, of which automatic water quality measuring stations,
- construction of: storage reservoirs (excluding fire and daily compensation reservoirs), water, navigational and energy steps as well as locks and weirs,
- regulation and management of rivers and streams,
- construction of flood embankments,
- construction of pump stations behind embankments and on depression areas.

Information within the scope of **forestry** concerns:

1. Public forests owned by:
 - a. the State Treasury managed and utilized temporarily or perpetually by:
 - the State Forests National Forest Holding (abbreviated as State Forests) supervised by the Minister of the Environment,

- nature protection units (national parks),
 - organisational units supervised by different ministers, voivods, gminas or municipal associations and the National Support Centre for Agriculture (until 31 August 2017 – the Agricultural Property Agency);
- b. gminas (of which gminas which are also cities with powiat status since 1999);
 - c. other public units.
2. Private forests owned by:
 - d. natural persons;
 - e. land held in common by all or part of the residents of a village;
 - f. agricultural production cooperatives;
 - g. other legal persons.

Forest land area in accordance with the Act of 28 September 1991 on Forestry (Journal of Laws of 2021 item 1275) includes:

1. Land of a contiguous area of at least 0.10 ha covered by forest vegetation (wooded area) or temporarily devoid of forest vegetation (non-wooded area). These areas are designated for forest production, or included in nature reserves and national parks, or registered as nature monuments. This category is referred to as **"forest area"**.
2. **Land related to forest management** used for purposes of forest management: buildings and structures, forest division lines, forest roads, forest nurseries, wood depot areas, etc.

Forest cover (forest cover indicator) was calculated as the percentage ratio of forest area to the total geographical area of the country, ecoregion, voivodships.

Population

Tables regarding the size and structure of the population according to demographic features, vital statistics and migration were compiled on the basis of:

- the results of national censuses and population estimation prepared by the Statistics Poland,
- the registers of the Chancellery of the Prime Minister on internal and international migration of population for permanent residence,
- documentation of gminas regarding internal and international migration of population for temporary stay,
- documentation of Civil Status Offices regarding registered marriages, births and deaths.

Working age population refers to males aged 18–64 and females aged 18–59. In this category the age groups of mobility (i.e. 18–44) and non-mobility (i.e. 45–64 for males and 45–59 for females) are distinguished. Non-working age population is defined as **pre-working age population**, i.e. up to the age of 17 and **post-working age population**, i.e. 65 and more for males and 60 and more for females.

Data regarding **vital statistics** according to territorial division were compiled as follows:

- marriages – according to the husband's place of permanent residence before the marriage, in case when a husband lived abroad before the marriage the wife's place of residence in Poland before the marriage,
- births – according to the mother's place of permanent residence,
- deaths – according to the place of permanent residence of the deceased.

Data regarding **internal migration** of the population were compiled on the basis of gmina documentation regarding the registration of persons for permanent residence. This information does not include changes of address within the same gmina, with the exception of urban-rural gminas for which the division into urban and rural areas has been kept.

Data regarding **international migration** of the population were compiled on the basis of gmina documentation regarding the registration of people arriving to Poland for permanent residence (immigration) as well as regarding cancelled registration of people leaving Poland for permanent residence abroad (emigration).

Inflow of the population includes registrations of arrival for permanent residence, outflow – registrations of departure from permanent residence.

Labour market

Data on **unemployed persons registered** in the powiat labour offices are presented in accordance with the Law of 20 April 2004 on Promoting Employment and Labour Market Institutions (Journal of Laws of 2021 item 1100, as amended).

Unemployed person is a person aged 18 and more and has not reached the retirement age, is not employed and not performing any other kind of paid work, capable of work and ready to take full-time employment (or in case he/she is a disabled person – capable and ready to take work comprising no less than a half of working time), not attending school with the exception of schools for adults (or taking extra curriculum exam covering this school curriculum) or tertiary schools in part-time programme, registered in the local labour office competent for his/her place of residence (permanent or temporary), and seeking employment or any other income-generating work, with additional provisions concerning the sources of income, included in the law.

Long-term unemployed are persons remaining in the register rolls of the powiat labour office for the overall period of over 12 months during the last two years, excluding the periods of traineeship and vocational training of adults in the workplace.

Dwellings. Municipal infrastructure

Data regarding **dwelling stocks** have been compiled on the basis of the balances of dwelling stocks, as of 31 December, in each administrative division.

The balances of dwelling stocks are estimated for the periods between censuses on the basis of results from the last census with regard to the current reporting, i.e. increase and decrease in dwelling stocks.

Information on dwelling stocks and **dwellings completed** concerns dwellings located in residential and non-residential buildings. Data do not include collective accommodation facilities (employee hostels, student dormitories and boarding schools, social welfare homes and others) and spaces not designed for residential purposes, but which for various reasons are inhabited (animal accommodations, caravans, ships, wagons and others).

Information on dwellings completed concerns dwellings in newly built and expanded buildings (the enlarged part) as well as dwellings obtained as a result of adapting non-residential spaces.

Information regarding the effects of:

- **private construction** concerns dwellings completed by natural persons, foundations, churches and religious associations, intended for the own use of the investor,
- **construction for sale or rent** concerns dwellings completed by various investors in order to achieve a profit,
- **cooperative construction** concerns dwellings completed by housing cooperatives, intended for persons being members of these cooperatives,
- **municipal (gmina) construction** concerns dwellings realised entirely from the budget of gmina (primarily with a public assistance or intervention character),

- **company construction** concerns dwellings completed by companies (of the public and private sectors), intended for meeting the residential needs of the employees of these companies,
- **public building society** concerns dwellings built by public building societies (operating on a non-profit basis) using credit from the state bank BGK.

Due to methodological change, since 2018, data regarding effects of "private construction" realised for sale or rent in order to achieve a profit, are included into the form of construction "for sale or rent".

Data regarding municipal installations and services were compiled using the kind of activity method, i.e. according to the criterion of installation designation, regardless of the predominant kind of activity of the economic entity.

Information regarding the **users of water supply and sewage systems** includes the population living in residential buildings connected to a defined system. Data regarding the **gas users** concern the population in dwellings equipped with gas installations connected to the gas supply system.

Data regarding the population using the water supply, sewage and gas supply systems include also the population in collective accommodation facilities.

Urban areas served by wastewater treatment plants include urban areas from which municipal wastewater before discharging into receiving water was subjected to mechanical, biological or with increased biogene removal treatment.

Information regarding the **length of the water supply network** concerns distribution network (excluding connections leading to residential buildings and other constructions).

Data regarding the length of the sewage network, apart from street conduits, include collectors, i.e. conduits receiving sewage from the street network; while they do not include sewers designed exclusively for draining run-off.

Water supply and sewage connections leading to residential buildings (including collective accommodation facilities, e.g.: employee boarding houses, student dormitories and boarding schools, social welfare homes) and gas supply connections leading to buildings (including non-residential buildings) are understood as branches linking individual buildings with the distribution network or, in case of the sewage system – with the main drainage system.

Street outlet is a device connected with the water supply system, used by the population as a direct source of water supply.

Data regarding **consumption of water in households** include quantity of water collected from the water supply system by facilities installed in building.

Education

The education system in Poland functions according to the Act of 14 December 2016 – the Law on School Education (Journal of Laws 2021 item 1082, as amended), the Act of 7 September 1991 on the Education System (Journal of Laws 2021 item 1915) and the Act of 20 July 2018 – the Law on Higher Education and Sciences (Journal of Laws 2021 item 478, as amended).

Since 1 September 2017, the new school system has been implemented, introducing 8-year primary school, 4-year general secondary school, 5-year technical secondary school, 3-year stage I sectoral vocational school, 2-year stage II sectoral vocational school. Lower secondary schools have been abolished.

The presented data include:

1. Pre-primary education establishments.
2. Schools for children, youth and adults:
 - a. primary schools;

- b. power secondary schools;
 - c. post-primary schools; of which post-secondary schools.
3. Higher education institutions.

Schools for children and youth (including special schools) include:

1. Primary schools, of which branch schools, art schools not leading to professional certification simultaneously conducting a primary school curriculum.
2. Lower secondary schools for children and youth (functioning in the 2018/19 school year).
3. Post-primary schools:
 - a. 3-year special job-training schools;
 - b. 3-year stage I sectoral vocational schools (until the 2016/17 school year 2-,3-year basic vocational schools);
 - c. 2-year stage II sectoral vocational schools;
 - d. 4-year general secondary schools (until the 2018/19 school year 3-year general secondary schools);
 - e. 5-year technical secondary schools (until the 2018/19 school year 4-year technical secondary schools);
 - f. general art schools leading to professional certification (excluding special schools), with the exception of schools providing art education only;
 - g. functioning until the 2013/14 school year 3-year specialized secondary schools as well as – 2-year supplementary general secondary schools and 3-year supplementary technical secondary schools for graduates of basic vocational schools.

Post-secondary schools – educating in day, evening and weekend, form include:

1. Post-secondary schools (1-, 1.5- or 2-year), including special schools.
2. Colleges of social work (3-year) – since 2005/06 school year.
3. Functioning until the school year 2015/16 foreign language teacher training colleges (3-year) operating until the 2015/16 school year, in which graduates did not obtain the title of Bachelor.

Tertiary education (university level) consists of full-time programmes (until 2005/06 academic year – day study system) and part-time programmes (until 2005/06 academic year – evening, weekend and extramural study systems). Data regarding tertiary education:

1. Until the 2015/16 academic year, included foreign language teacher training colleges and teacher training colleges in which graduates obtained the title of Bachelor.
2. Comprise foreigners studying in Poland (including students at branch units of Polish higher education institutions operating abroad).
3. Do not include Poles studying abroad (with an exception of persons at branch units of Polish higher education institutions operating abroad).

The presented information, except for the data on higher education institutions, has been compiled on the basis of the Educational Information System administered by the Ministry of Education and Science.

Since the 2017/18 academic year, data on higher education institutions, except for the data on some higher schools run by churches and other religious associations, have been compiled on the basis of PO-on, the Integrated System of Information on Science and Higher Education, administered by the Ministry of Education and Science.

Pre-primary education establishments comprise nursery schools (including special nursery schools), pre-primary sections of primary schools, pre-primary education groups and per-primary points: since the 2004/05 school year 6-year old children have been covered by compulsory 1 year introductory pre-primary education establishments, with the exception of the 2011/12–2015/16 school years when it concerned children aged 5.

Health care and social welfare

Data regarding **beds in general hospitals** and concern permanent beds in patient wards, either occupied or prepared to receive patients; do not include day-time places in hospital wards.

Generally available pharmacies do not include pharmacies, which operate in the structure and for needs of hospitals.

Pharmaceutical outlets are sales outlets for selling prepared medicines, the range of which is precisely defined. They should be located in rural areas.

Data concerning **social welfare homes and facilities** are related to the institutions for which the founding bodies are: local government entities, associations, social organizations, churches and religious associations, foundations, natural and legal persons.

Social assistance at domicile is assistance provided on the basis of the Law on Social Assistance by a local (gmina, urban, urban-rural) social assistance centre within duties delegated as well as its own duties, for households and people residing in the area of gmina's activity. In cities with powiat status the municipal social assistance centre, apart from the tasks of gmina, realize also tasks of powiat. In these cases, data only on gmina's tasks are included. Social assistance at domicile is an essential (apart from stationary forms) part of the social welfare system as the institution of the social policy of the State.

Culture. Tourism

Library institutions include public libraries, branches and library service points.

Collection (books and pamphlets as well as newspapers and magazines) is counted in volumes, i.e. in number of units covered and possessing an independent signature.

Among **objects recorded in the register of historical monuments** there were following categories distinguished:

- urban planning (spatial principles) – urban and rural planning arrangements, districts and estates, squares and streets (as urban planning interior), conservation zones of landscape protection,
- sacred (sacred objects) – churches of different denominations, bell towers, chapels, cemeteries chapels, roadside shrines, statues,
- defensive (defensive construction objects) – defensive walls, urban and fort gates, forts, arsenals, guardhouses, barbicans, bastions, fortified towers,
- public (public buildings) – the seats of authorities, schools and dormitories, banks, post offices, hotels and pensions, theatres and cinemas, barracks and prisons, railway stations, hospitals and medical care homes, administrative buildings, arenas, casinos, barracks and prisons,
- greenery – palace and manor parks, manor gardens, exclusive residential gardens (as elements of arranged landscaping), urban parks, alleys,
- grange (grange buildings) – residential and farming out-buildings (in complexes), livestock buildings (in complexes), production buildings (in complexes), residential and functional buildings of grange workers (farm building with four apartments, gardener's, forester's and doctor's houses etc.), single objects after grange complexes, granaries, storehouses,
- residential (residential houses) – houses, tenements, peasant cottages, palaces and urban manor houses, presbyteries, vicar's and organist's houses, monasteries, residential outbuildings, houses in estate areas (detailed in spatial decisions), houses in working-class estates (entered into spatial plant complexes),

- farming (farm buildings) – any single farm objects in rural homesteads, granaries, storehouses as independent objects beyond grange complexes, auxiliary buildings at public objects and residential houses as well as at industrial plants,
- industrial (industrial construction) – industrial plants, production halls in factory complexes, workshops, accompanying objects, locomotive sheds, boiler houses, mining shaft towers, single production buildings beyond grange complexes (smithies, olive presses etc.), mills, windmills, hydro-technical devices, water towers, bridges and viaducts, power stations, gasworks and water supply systems,
- cemeteries – municipal, military and religious cemeteries, cemetery plots and single graves, mausoleums,
- castles,
- palaces – rural palaces (estate centres), urban palaces (in residential complexes),
- manor houses – rural manor houses (estate centres), suburban manor houses (in residential complexes), defensive manor houses (residential towers),
- others – fences, gates, links, cellars, monuments, fountains and wells, park architectural details (garden houses, caves, pavilions) and others.

Data concerning **border traffic** include only Polish border simultaneously being the external border of the Schengen zone. Poland became the part of the Schengen zone on 21 December 2007.

Tourist accommodation establishments include hotels and similar facilities as well as other facilities (since 2011 with 10 and more bed places; until 2010 they do not include rooms for rent and agrotourism lodgings).

In data regarding **facilities and number of beds for tourists**, facilities and places in temporarily inactive facilities due to expansion, renovation etc. are not included.

Bicycle road – road or its part intended for bicycle traffic, determined the appropriate road signs; a bicycle track is separated from other roads or road the same way by design or by using road traffic safety equipment.

Data concerns length of bicycle roads managed appropriately by gmina, powiat or voivodship (excluding length of bicycle trails): independent roads for bicycles (constructed as a part of traffic road); roads excluding from traffic roads; roads excluding from pavement; roads in foot-bicycle path. Length of bicycle roads is length of roads running in one direction. Length of road laying on the opposite side of the road are calculated separately. Data concerns that roads, which are used only to the communication purposes, while those to the tourism purposes (e.g. running through the forest) were not concerned.

Entities of the national economy recorded in the REGON register

Presented data concerning **entities of the national economy recorded in the REGON register** include legal persons, organizational entities without legal personality and natural persons conducting economic activity, classified into particular NACE Rev. 2 divisions according to the predominant kind of activity.

The National Office Business Register, hereinafter referred to as REGON, is an administrative register held by the President of the CSO. The rules for running the register are defined by the Act of the Council of Ministers, of 29 June 1995 on Public Statistics (Journal of Laws of 2023 item 773) and the provisions of the Regulation of the Council of Ministers of 30 November 2015 on the mode and methodology of running and updating the National Official Business Register, application, questionnaire, certificate specimens and detailed condition (Journal of Laws item 2009, as amended).

The basic function of the REGON register is identification of entities of the national economy, which is accomplished by assigning to them unique identification numbers.