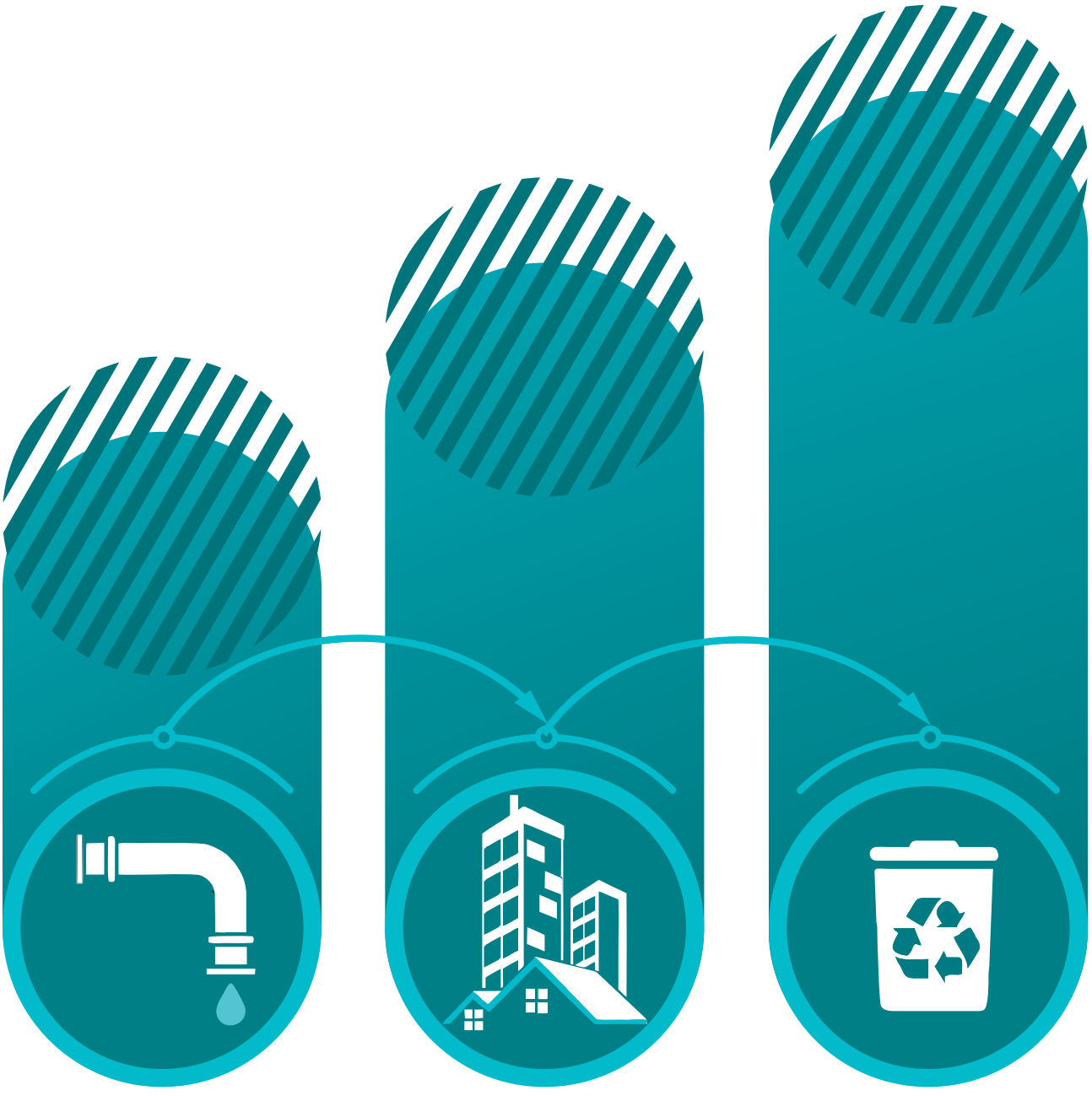
Statistical analyses

Statistics Poland



Housing Economy and Municipal Infrastructure in 2021

Warsaw 2022

Statistical analyses

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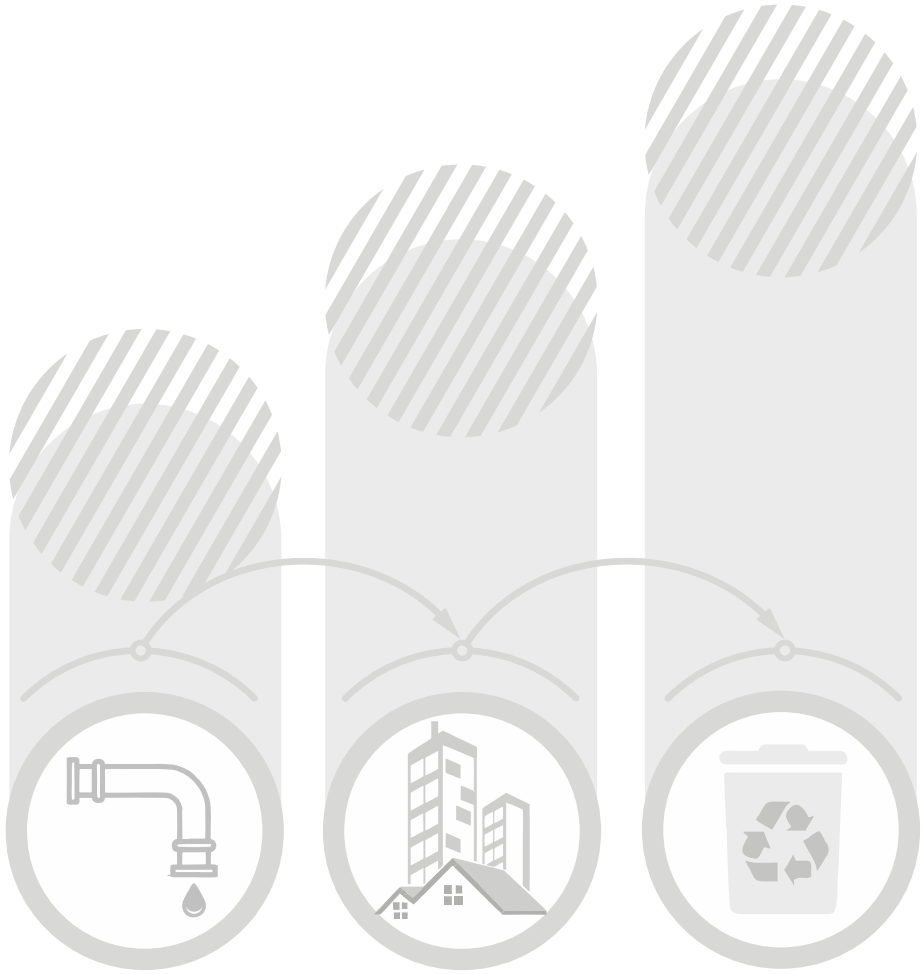

Housing Economy and Municipal Infrastructure in 2021

Statistics Poland

Warsaw 2022

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Preface

"Housing Economy and Municipal Infrastructure in 2021" is a publication on dwelling stocks management and on provision of municipal and household services in Poland. Information presented in this publication characterise the housing condition and state of the technical infrastructure facilitating the provision of services necessary for meeting the collective needs of the society within the scope of tasks of gminas, as well as enable observation of changes occurring in the examined areas of activities.

The current edition of the publication does not include information from the scope of the balance of dwelling stocks and dwellings fitted with sanitary and technical installations for 2021. Results of these studies, including data collected in National Population and Housing Census 2021 will be disseminated in Local Data Bank. The date of dissemination of information from the balance of dwelling stocks is planned for December 2022, whereas the date of dissemination of information in dwellings fitted with sanitary and technical installations – for June 2023.

This study, however, presents data on gminas' dwelling stocks, housing allowances paid, households awaiting rental of residential buildings, as well as data on land transferred for housing construction, obtained from Municipal Offices.

The state of municipal infrastructure is depicted by information on installations and municipal services in the field of water supply and sewage systems management, heating system management, distribution of electric energy and gas from gas supply system, as well as collecting and processing of municipal waste.

The data covered by the thematic scope of the publication were presented broken down by voivodships, and by urban and rural areas. Information at lower levels of aggregation (poviats and gminas) were made available in Local Data Bank on Statistics Poland website (http://www.stat.gov.pl).

Planning further development of research in the field of municipal infrastructure, the authors will be grateful to all persons and institutions for providing suggestions and comments, which would contribute to shaping and enriching the content of next editions of this publications.

Director
of Trade and Services Department

Ewa Adach-Stankiewicz

President
Statistics Poland

Dominik Rozkrut, Ph.D.

Warsaw, November 2022

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Symbols

Symbol	Description
.	data not available, classified data (statistical confidentiality) or providing data impossible or purposeless
–	magnitude zero
"of which"	indicates that not all elements of the sum are given

Abbreviations

Abbreviation	Meaning
m	metre
m^2	square metre
m^3	cubic metre
dam^3	cubic decametre
hm^3	cubic hectometre
km	kilometre
km^2	square kilometre
ha	hectare
kg	kilogram
kWh	kilowatt-hour
GWh	gigawatt-hour
MJ	megajoule
MPa	megapascal
TJ	terajoule
pcs	pieces
approx.	approximately

Executive summary

As of the end of 2021, the number of residential premises in the gminas' dwelling stocks, for which tenancy agreements were in force (excluding replacement premises and temporary premises) was 630.7 thousand, and the area thereof – 28,085.6 thousand m^2. Compared to 2020, the number of tenancy agreements for residential premises decreased by 2.7% (by 17.6 thousand), and the useful floor area of rented premises decreased by 641.5 thousand m^2. As of the end 2021, the average useful floor area of premises rented from gminas' dwelling stocks amounted to 44.5 m^2 (an increase of 0.2 m^2, compared to the previous year).

The number of residential premises with social rental contracts, as of the end of 2021, reached 66.3 thousand and was higher by 0.6%, compared to 2020, whereas the useful floor area of premises with social rental contracts amounted to 2,287.6 thousand m^2 (an increase of 2.2%).

As of the end of 2021, there were 129,019 households awaiting rental of premises from the gminas' dwelling stocks (excluding replacement premises and temporary premises) and, compared to 2020, this number decreased by 5.2%, yet 71,264 households were added to the waiting list of social rental of premises (a decrease of 4.8%). In 2021, almost 2.5 million of housing allowances was paid, for the amount of PLN 615.2 million. Compared to the previous year, there was a decrease in the number of housing allowances – of 3.6%, whereas the value of housing allowances paid rose by 5.9%.

In 2021, gminas transferred to investors for housing construction land of 1,163.9 ha, of which 83.5% was intended for single family housing construction.

Similarly to the previous year, in 2021, there were noted further investments in the field of sanitary and technical infrastructure. As of the end of 2021, both an increase in the length of water supply distribution network and sewage network was noted (to 316.7 thousand km and 173.5 thousand km, respectively), as well as in the number of water supply connections (to over 6.0 million pcs) and sewage connections (to almost 3.7 million pcs). The average household consumption of water, however, decreased (to 33.7 m^3 per inhabitant), as well as the amount of wastewater discharged from households (to 994.6 hm^3). There was also more on-site systems for discharging of wastewater (approx. 2,440.1 thousand pcs), of which almost 87% accounted for septic tanks, from which, during the year, about 31.7 hm^3 of domestic liquid waste was collected. The number of dump stations, operational as of the end of 2021, also increased (to 2,381 pcs).

As of the end of 2021, both the total length of gas supply network and the length of gas connections increased in Poland, and reached 165.7 thousand km and 55.0 thousand km, respectively. In 2021, in Poland, household consumption of gas from gas supply system rose and amounted to 59,431.5 GWh, with the simultaneous increase of 2.5% in the number of consumers.

Household consumption of electric energy in Poland, in 2021, rose slightly and reached the level of approx. 31,647.1 GWh, whereas household consumption of electric energy per consumer decreased by 0.8% and amounted to 1,979.9 kWh.

The total length of heating network, as of the end of 2021, amounted to 25,238.7 km, of which 65.5% accounted for transmission and distribution network (16,524.8 km), and 34.5% for connections to buildings (8,713.9 km). In 2021, in Poland, the sale of heating network amounted to 211.7 thousand TJ, of which 166.5 thousand TJ (78.6%) for the purpose of heating of residential buildings.

In 2021, in Poland, an increase in the amount of municipal waste generated was noted – to 13,673.6 thousand tonnes (of which 85,8% originated from households). The average amount of municipal waste generated per one inhabitant increased also (to 360 kg). In 2021, there was also noted an increase in the share of municipal waste collected separately in the total amount of municipal waste generated (to 39.8%). As of the end of 2021, the number of public facilities of separate waste collection increased (to 2,279). As of the end of 2021, there was noted a decrease in the number of operational landfill sites receiving municipal waste (to 265, of the area of 1,667.2 ha). However, the number of dumping sites increased (to 2,246).

MANAGEMENT OF DWELLING STOCKS

Chapter 1

Gminas' (municipal) dwelling stocks and temporary premises stocks

1.1. Rental of residential premises and temporary premises

The dwelling stocks of gmina are understood as premises used to meet the housing needs, comprising the property of gmina or gmina's owned companies, to which gmina had entrusted obligation to perform gmina's task in the scope of meeting the housing needs of the self-government community (excluding public building societies) as well as premises remaining in actual possession of these entities.

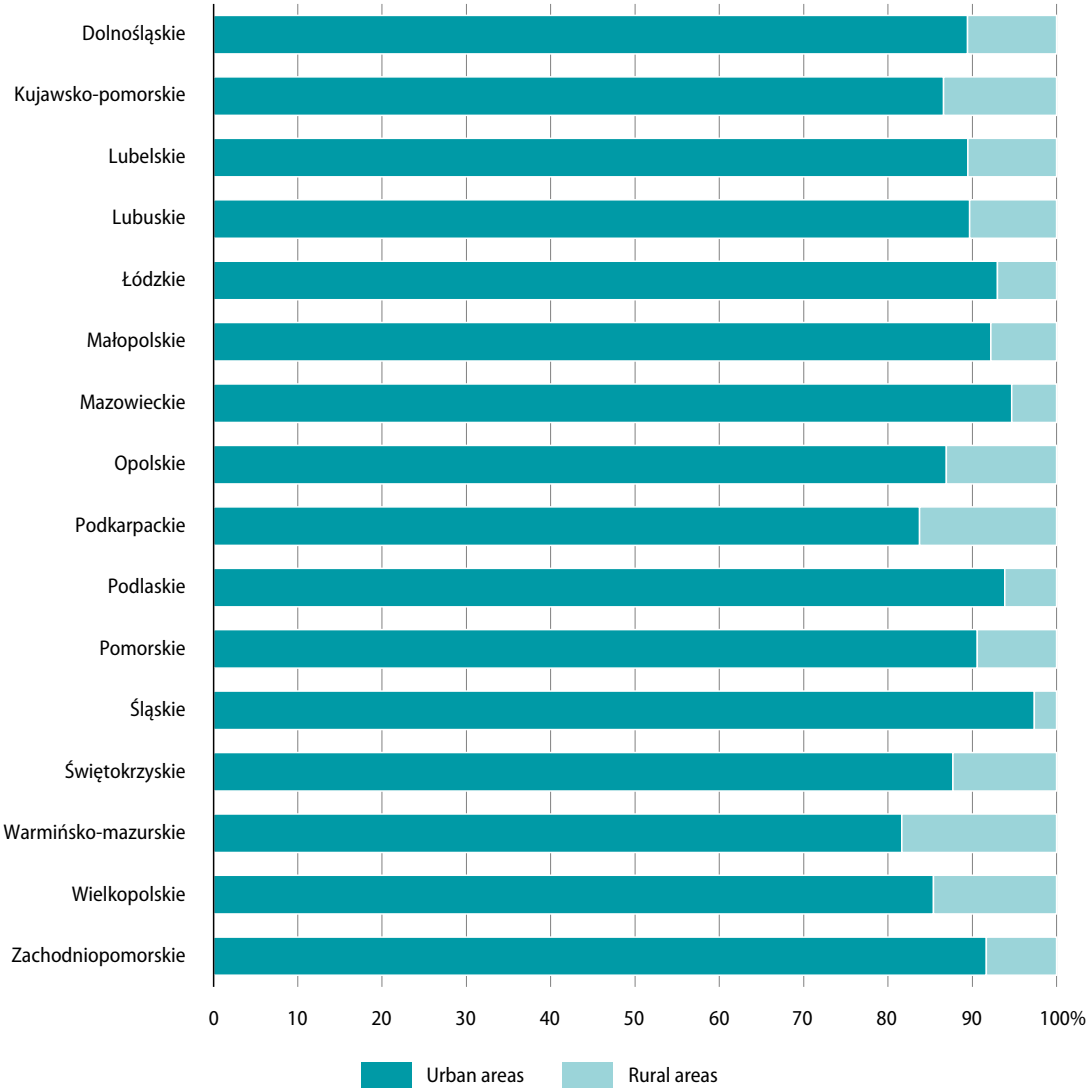
The social premises rental contract is a contract for the rent of habitable premises with regard to equipment and technical conditions, which room area per household member shall not be less than 5 m^2, and in the case of a single person household – 10 m^2, however they can be substandard premises. The social premises rental contract is concluded for a fixed period. The rent price in the case of the rental of social premises cannot exceed half of the lowest rent price applicable in the gmina's dwelling stocks.

Temporary premises are understood as habitable premises, with access to a water supply system and to a lavatory, even if the equipment is located outside the building, natural and electric lighting, a heating system, not damp building partitions, and the possibility of installation of cooking appliances, as well as providing at least 5 m^2 of room surface per person and, if possible, located in the same or a nearby area where the rehoused persons have lived so far.

The number of residential premises in the gminas' dwelling stocks, for which, as of the end of 2021, tenancy agreements were in force (excluding replacement and temporary premises) amounted to 630.7 thousand, and the useful area thereof – to 28,085.6 thousand m^2. Compared to 2020, the number of tenancy agreements for residential premises decreased by 2.7% (by 17.6 thousand); in urban areas – by 2.8% (by 16.9 thousand), and by 1.3% (by 730) in rural areas. The area of premises with rental agreements, however, decreased by 641.5 thousand m^2, i.e. by 2.2% (in rural areas it fell by 20.3 thousand m^2, i.e. by 0.8%, and in urban areas by 621.2 thousand m^2, i.e. by 2.4%).

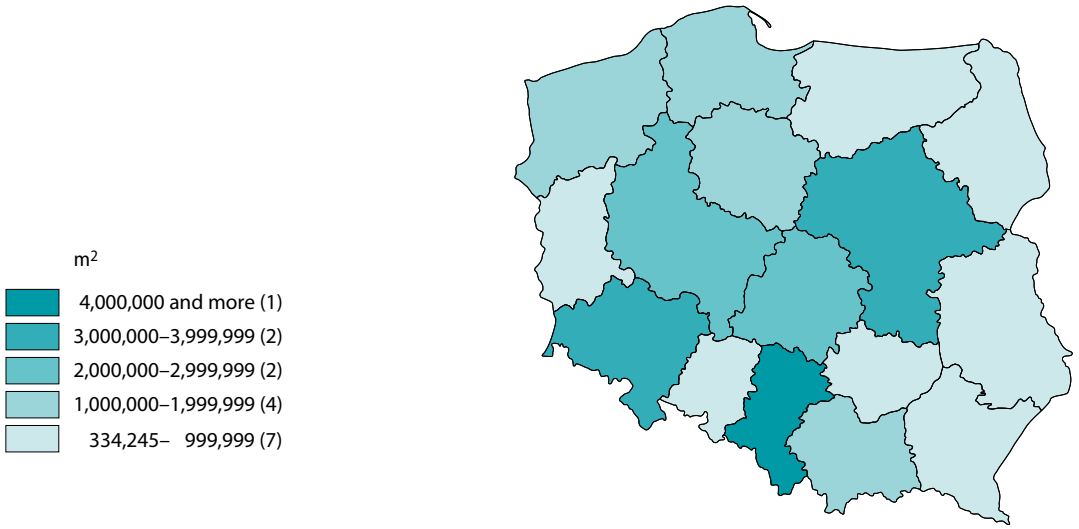
Similarly to the previous year, the most of residential premises for which rental agreements were in force as of the end of 2021 were located in voivodships: Śląskie (121.4 thousand), Mazowieckie (94.0 thousand), and Dolnośląskie (75.5 thousand). The least number of residential premises for which rental agreements were in force, however, was noted in voivodships: Świętokrzyskie (8.6 thousand), Podlaskie (12.0 thousand), and Podkarpackie (13.0 thousand).

Chart 1. Residential premises for which rental agreements were in force – as of 31 December 2021



The only increase of residential premises for which rental agreements were in force was noted in voivodships Podkarpackie (of 4.9%), and Pomorskie (of 2.7%). The largest decrease was recorded in voivodships: Kujawsko-pomorskie (of 8.2%), Zachodniopomorskie (of 7.1%), and Śląskie (of 4.9%), compared to 2020. The most of useful area of rented premises was noted in Śląskie Voivodship – 5,593.4 thousand m^2, and the least in Świętokrzyskie Voivodship – 334.2 thousand m^2.

Map 1. Useful area of residential premises for which rental agreements were in force – as of 31 December 2021



In 2021, the average area of residential premises rented from gminas' dwelling stocks amounted to 44.5 m^2 (an increase of 0.2 m^2, compared to the previous year). The highest average useful floor area of rented premises was observed in Opolskie Voivodship (49.5 m^2), and Wielkopolskie Voivodship (47.6 m^2), whereas the lowest in Świętokrzyskie Voivodship (39.1 m^2), Mazowieckie Voivodship (40.8 m^2) and Zachodniopomorskie Voivodship (47.3 m^2).

Table 1. Rental of residential premises from gminas' dwelling stocks and rental of temporary premises – as of 31 December 2021

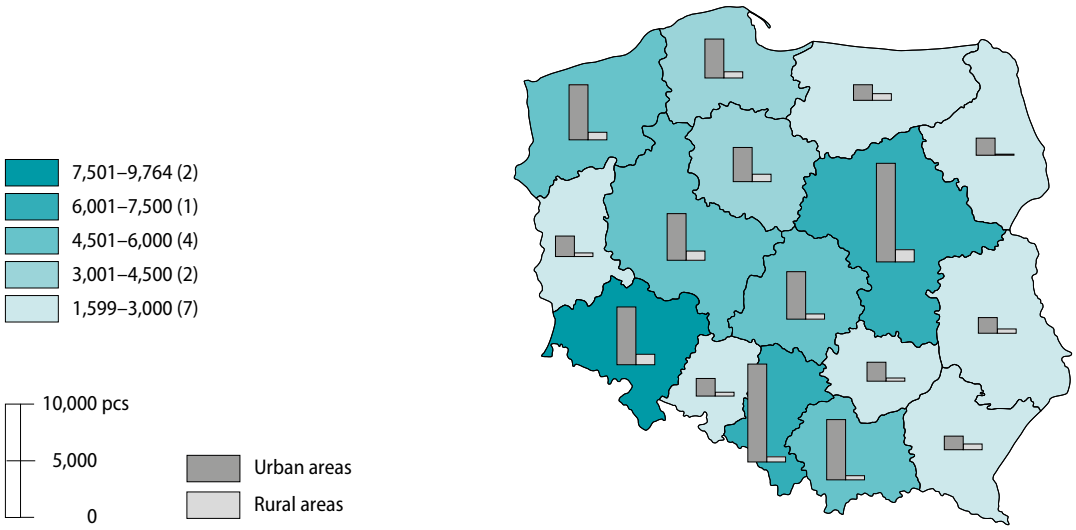
Specification	Poland	Urban areas	Rural areas
Rental agreements in force			
Residential premises[a]	630,728	577,358	53,370
of which social rental contracts	66,267	57,817	8,450
Temporary premises	1,365	1,227	138
Useful floor area in thousand m^2			
Residential premises[a]	28,085.6	25,611.7	2,473.9
of which social rental contracts	2,287.6	1,988.1	299.5
Temporary premises	30.7	27.2	3.5
The average useful floor area in m^2			
Residential premises[a]	44.5	44.4	46.4
of which social rental contracts	34.5	34.4	35.4
Temporary premises	22.5	22.2	25.4

a Excluding replacement premises and temporary premises.

The number of residential premises with social rental contracts, as of the end of 2021, amounted to 66.3 thousand and was higher by 0.6% compared to 2020, whereas the area thereof was 2,287.6 thousand m^2 (an increase of 2.2%). In urban areas 57.8 thousand social rental contracts were signed for residential premises with the area of 1,988.1 thousand m^2, whereas in rural areas 8.5 thousand of residential premises were covered by contracts, with the area of 299.5 thousand m^2.

Broken down by voivodships, the largest increase in the number of premises with social rental contracts in rural areas was noted in voivodships: Podkarpackie – of 84.0% (of 231 contracts), Mazowieckie – of 5.0% (of 51 contracts), and Małopolskie – of 3.7% (of 13 contracts). Whereas, in urban areas, the largest increase was noted in Wielkopolskie Voivodship – of 31.0% (of 972 contracts), and Pomorskie Voivodship – 11.9% (of 366 contracts).

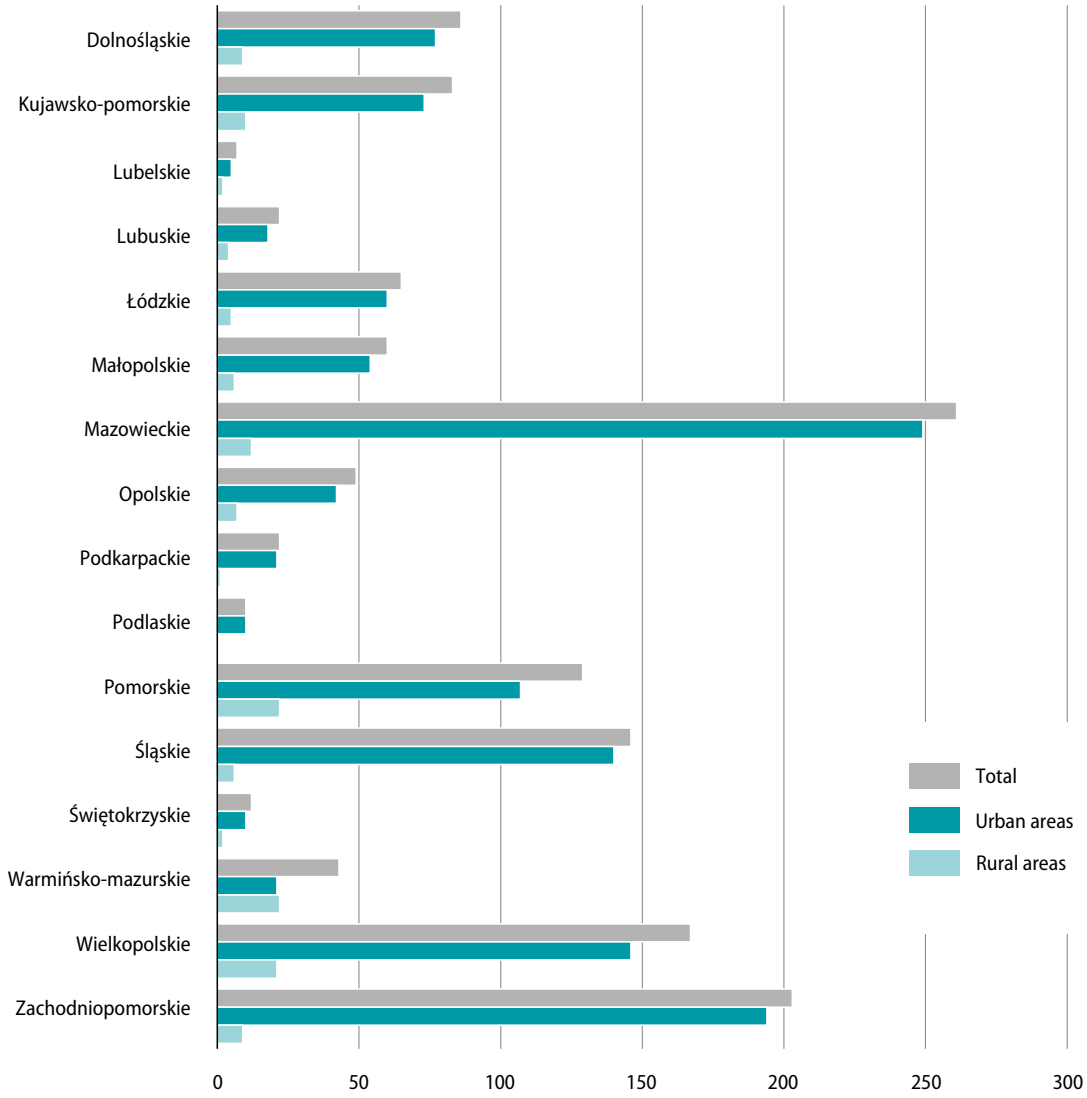
Map 2. Residential premises with social rental contracts – as of 31 December 2021



The highest average useful floor area of a premise with social rental contract was noted in rural areas of Podkarpackie Voivodship (47.5 m^2), whereas the lowest in urban areas of Łódzkie Voivodship (29.3 m^2). The average useful floor area of a premise with social rental contract in Poland was 34.5 m^2.

As of the end of 2021, gminas had social rental contracts for 1,365 temporary premises with area of 30.7 thousand m^2. Compared to 2020, the number of contracts decreased – by 22.4%, whereas the area of rented premises – by 21.9%.

Chart 2. Temporary premises rental – as of 31 December 2021



1.2. Demand for the rental of residential premises and temporary premises

Households awaiting rental of premises from a gmina – households meeting the requirements of the gmina council resolution determining the rules for rental of premises being a part of gmina's dwelling stocks.

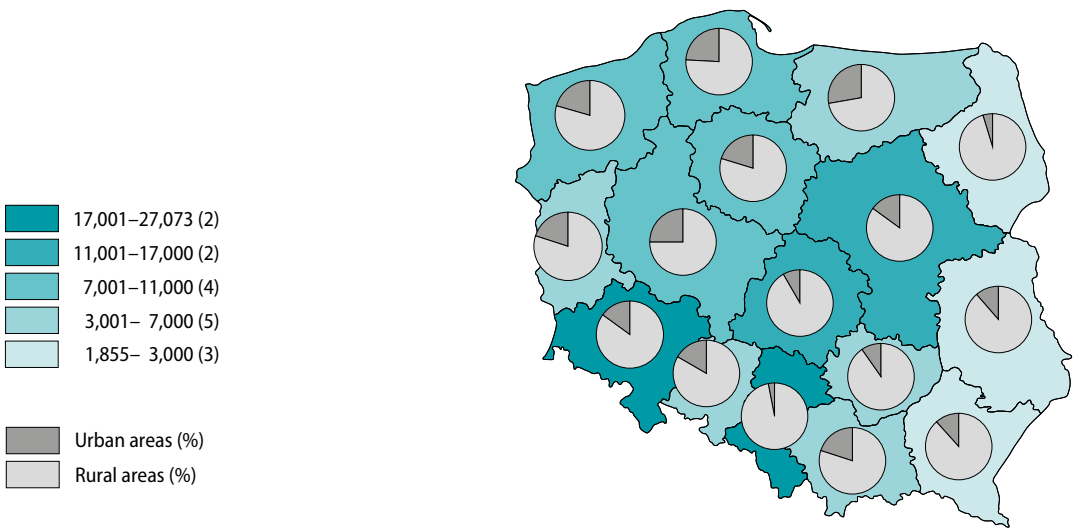
As of the end of 2021, there were 129,019 households awaiting rental of premises from the gminas' dwelling stocks (excluding replacement premises and temporary premises). Compared to 2020, the number of households awaiting rental of residential premises decreased by 5.2% (by 7,137 households).

Table 2. Households awaiting rental of residential premises from the gminas' dwelling stocks and rental of temporary premises – as of 31 December 2021

Specification	Grand total	Social rental of premises		Rental of temporary premises
		total	of which on the basic of execution of eviction sentences	
		In absolute numbers		
Poland	**129,019**	**71,264**	**42,064**	**16,635**
urban areas	110,637	65,117	41,241	16,522
rural areas	18,382	6,147	823	113
		Poland=100%		
urban areas	85.8	91.4	98.0	99.3
rural areas	14.2	8.6	2.0	0.7

As of the end of 2021, the most households awaiting rental of premises were noted in urban areas – 110.6 thousand, which was 85.8% of the total. In rural areas, the number of households awaiting the rental decreased by 3.6% compared to the previous year (by 694 households). An increase in the number of households awaiting rental of residential premises was observed only in Dolnośląskie Voivodship (of 9.2%), and Podlaskie Voivodship (of 2.4%). The largest decrease was noted in voivodships: Zachodniopomorskie (of 12.1%), Pomorskie (of 11.6%) and Mazowieckie (of 11.1%).

Map 3. Households awaiting rental of premises – as of 31 December 2021

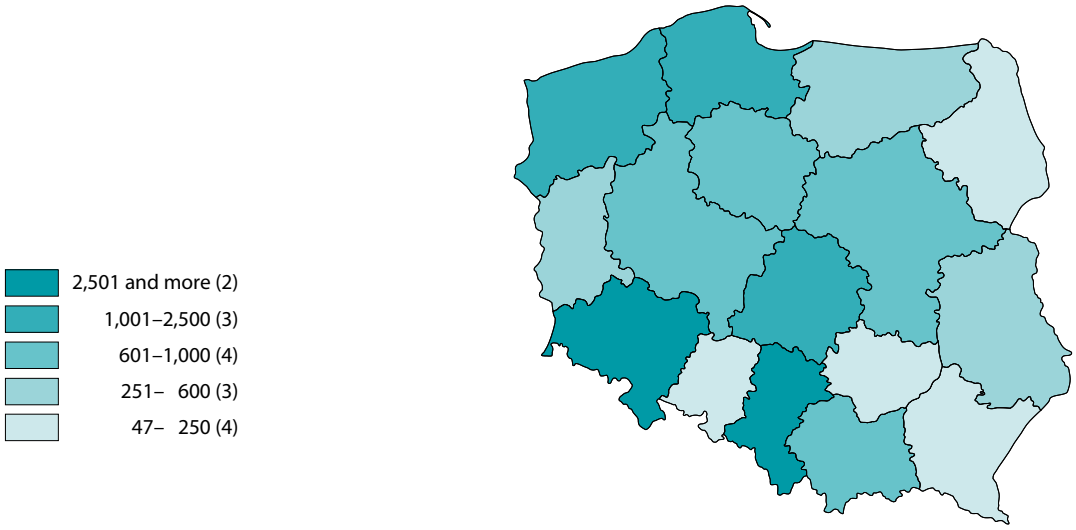


Out of the total number of households awaiting rental of premises from gminas' dwelling stocks, 71,264 households were awaiting social rental of premises (a decrease of 4.8%, compared to 2020). The most of households awaiting social rental was observed in voivodships: Śląskie – 15,107, Dolnośląskie – 8,749, and Łódzkie – 7,158. Similarly to the previous year, the least households awaited social rental in Podlaskie Voivodship – 738, Podkarpackie Voivodship – 1,403, and Lubelskie Voivodship – 1,428.

In 2021, in urban areas, 14,885 households were added to the list of households awaiting social rental, while in rural areas it was 1,798 households. In urban areas, 9,904 households was removed from the waiting list, whereas in rural areas it was 741 households.

As of the end of 2021, 42,064 households were awaiting social rental of premises on the basis of execution of eviction sentences (a decrease of 3.1%). As of the end of 2021, the number of households awaiting rental of temporary premises was 16,635. Compared to the previous year, the number of these households decreased by 1.6% (by 263 households).

Map 4. Households awaiting rental of temporary premises – as of 31 December 2021



1.3. Housing allowances

Housing allowance is a common and periodical financial benefit resulting from regulations of the Act of 21 June 2001 on residential benefits, intended to provide financial support for expenses related to occupation of residential premises or single family houses.

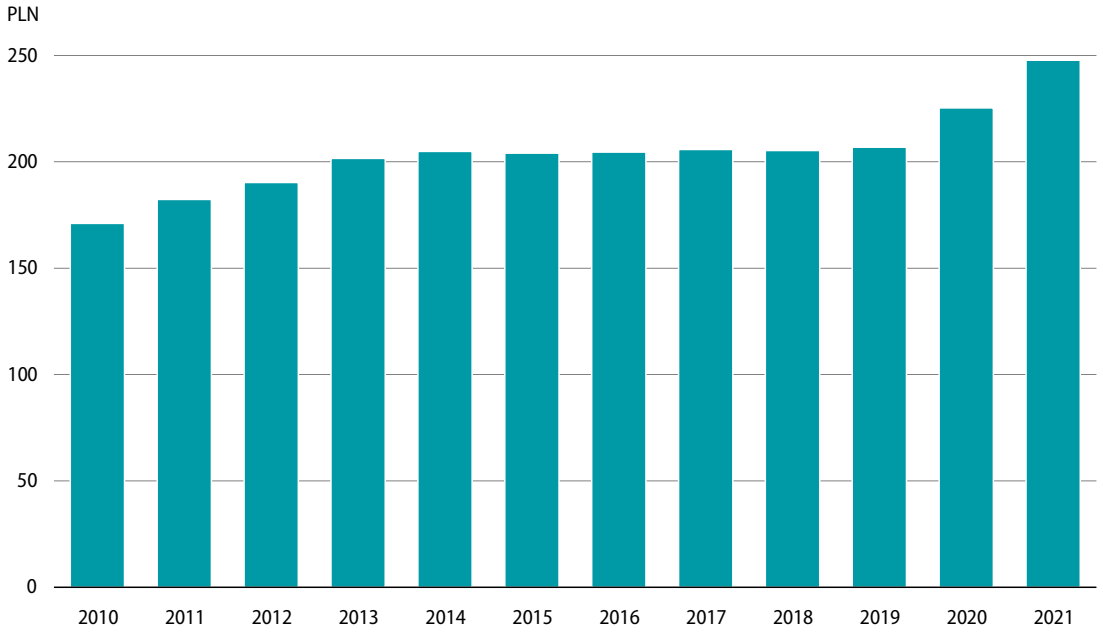
Characteristics: it is an obligatory provision granted upon the request of entitled person, meaning that people meeting statutory conditions have the right to demand its payment and it is common (it will be granted regardless of the legal title to the premises that appertains the entitled person apart from exceptions stipulated by law), as well as periodical – because it is granted for a defined period with a possibility to be granted again in the case of further meeting the statutory conditions.

In 2021, almost 2.5 million housing allowances were paid, for the total amount of PLN 615.2 million. Compared to the previous year, there was a decrease in the number of housing allowances – of 3.6%, while the value of housing allowances paid – of 5.9%. As in the previous year, the most of housing allowances was paid to inhabitants of municipal premises, i.e. 40.7%, and premises of housing cooperatives – 26.3%, whereas the least – to users of premises of public building societies – 2.4%, and to users of premises of other entities – 4.6%.

The largest number of granted housing allowances was recorded in voivodships: Śląskie – 438.2 thousand for PLN 108.8 million, Mazowieckie – 262.4 thousand for PLN 64.3 million, and Wielkopolskie – 230.6 thousand for PLN 65.0 million. The smallest number of granted housing allowances was in voivodships: Świętokrzyskie – 40.8 thousand for PLN 8.2 million, Opolskie – 49.8 thousand for PLN 11.3 million, and Lubuskie – 72.2 thousand for PLN 19.7 million.

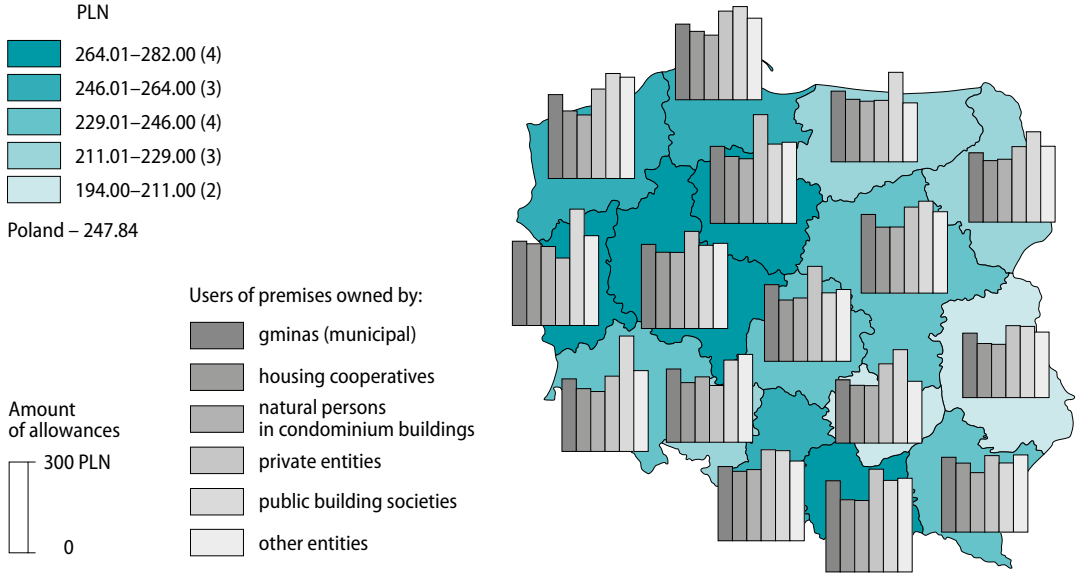
The value of housing allowances paid in urban areas was PLN 571.6 million, of which users of gminas' premises PLN 241.5 million, and users of premises of housing cooperatives PLN 136.7 million. In rural areas, however, housing allowances of value PLN 43.6 million were paid, of which to users of gminas' premises PLN 14.4 million, and users of premises of housing cooperatives – PLN 7.3 million.

Chart 3. Average amount of housing allowances in the years 2010–2021



The average value of housing allowance in 2021 was PLN 247.84 (an increase of 9.9%, compared to 2020, i.e. of PLN 22.37). The highest average value of housing allowance was paid to the users of private premises – PLN 307.83 (an increase of 9.4%, compared to the previous year), and the lowest – to the users of premises covered by condominiums – PLN 214.58 (an increase of 9.0%). In urban areas, the average value of housing allowance amounted to PLN 248.64, whereas in rural areas – PLN 237.83. The highest average value of housing allowances paid was noted in voivodships: Wielkopolskie – PLN 282.00, Małopolskie – PLN 277.87, and Kujawsko-pomorskie – PLN 273.78, while the lowest in voivodships Lubelskie – PLN 194.44, and Świętokrzyskie – PLN 200.72.

Map 5. Average amount of housing allowances paid in 2021



Chapter 2

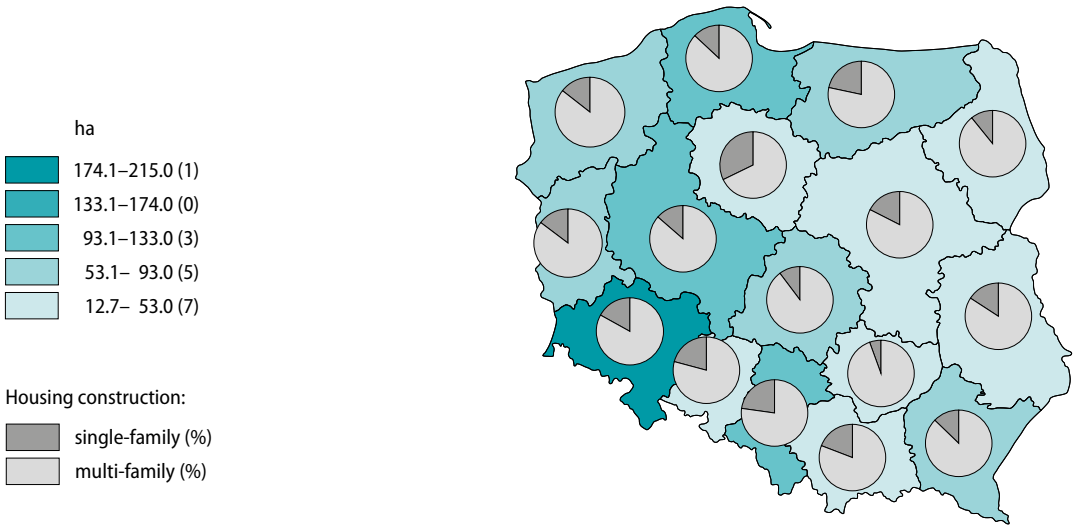
Management of land for housing construction

The term **common land** is to be understood as land owned by municipalities and inter-municipal associations, land with unknown owners in actual possession of municipal organisational units without legal personality, and land owned by municipalities and inter-municipal associations under the perpetual usufruct.

Improved lands are to be understood as building plots intended for housing construction purposes with possibility of connection to water supply system, sewage system, electrical power system, and heating system.

In 2021, gminas transferred 1,163.9 ha of land to investors for housing construction (an increase of 26.3% compared to the previous year), of which 83.5% was intended for single family housing. Out of the total area of land transferred to investors for housing construction, 57.4% constituted land in urban areas. The most of land transferred to investors for housing construction in 2021, i.e. 842.4 ha was transferred to natural persons, to companies and other entities – 224.8 ha, to housing cooperatives – 68.2 ha, and to public building societies – 26.3 ha, whereas to housing cooperatives – 2.2 ha.

Map 6. Land transferred to investors for housing construction in 2021



In the total area of land transferred for housing construction the largest share was noted in voivodships: Dolnośląskie (18.4%), Pomorskie (10.2%), and Wielkopolskie (9.2%), whereas the smallest in voivodships: Świętokrzyskie (1.1%), Podlaskie and Lubelskie (2.5%, each).

Regarding the land owned by gminas, intended for housing construction, as of the end of 2021, about 57.7% was in urban areas, and 65.0% of that land was intended for single family housing. Out of the total area of land intended for housing construction 44.0% constituted improved lands (of which 61.5% was in urban areas).

As of the end of 2020, the highest share of land intended for housing construction was in voivodships: Małopolskie – 3,582.1 ha, Śląskie – 3,322.6 ha, and Dolnośląskie – 3,306.7 ha, while the lowest in voivodships: Świętokrzyskie – 266.9 ha, Kujawsko-pomorskie – 582.2 ha, and Podlaskie – 664.7 ha.

MUNICIPAL INFRASTRUCTURE

Chapter 1

Water supply system and sewage system

1.1. Water supply infrastructure

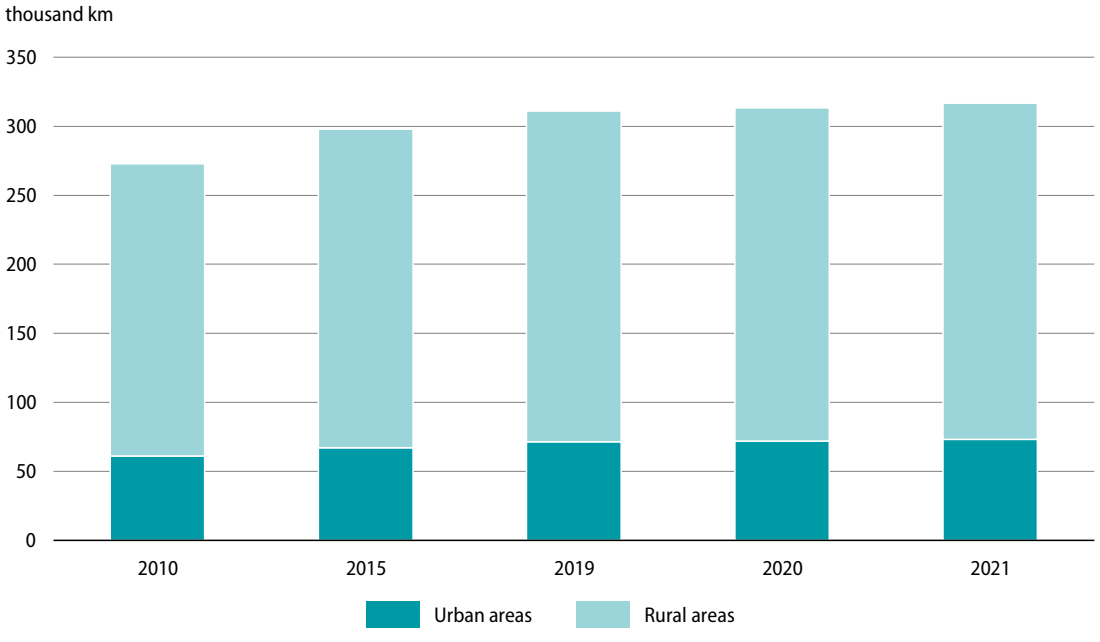
Water supply distribution network – street conduits used for distribution of water to consumers by the connections to buildings and other objects.

Water supply connection – a segment of a conduit connecting water supply network with internal water supply installation in a property of consumer, together with a valve past the main water meter.

Similarly to previous years, in 2021, further investments in the area of sanitary and technical infrastructure were recorded. Compared to 2010, the length of water supply distribution network increased by 16.0%, i.e. from 272.9 thousand km in 2010 to 316.7 thousand km in 2021, though in rural areas from 211.9 thousand km to 243.5 thousand km, i.e. by 14.9%. The number of connections to residential buildings increased, however, by 1,091.4 thousand pcs, i.e. by 22.1%, including 710.1 thousand pcs in rural areas, i.e. by 23.4%.

In 2021, the most significant growth in the length of water supply distribution network was observed, similarly to 2020, in urban areas of voivodships: Podkarpackie – of 35.3%, Mazowieckie – of 30.1%, and Lubuskie – of 29.1%, and in rural areas of voivodships: Małopolskie – of 24.7%, Pomorskie – of 24.5%, and Warmińsko-mazurskie – of 21.6%.

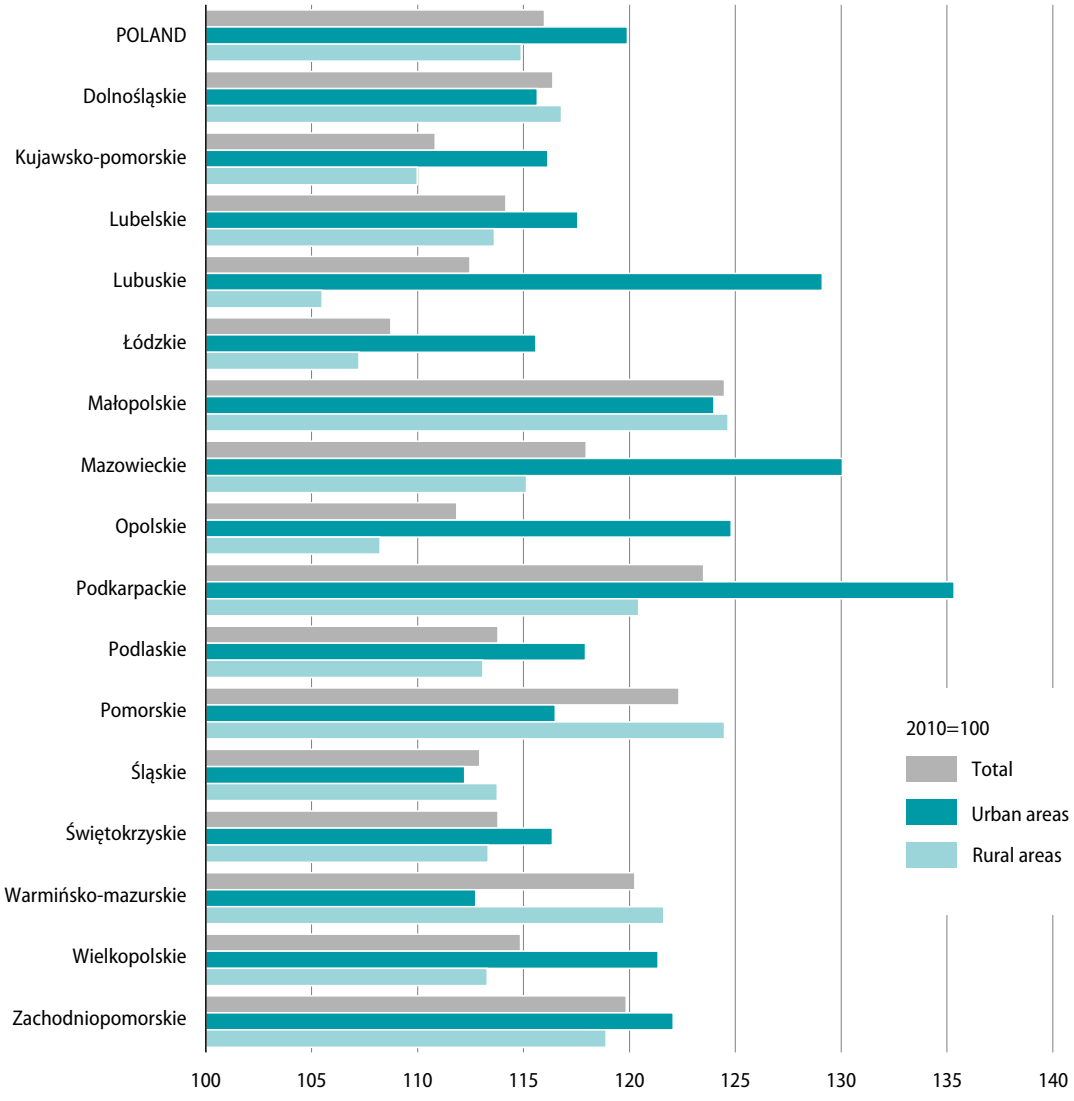
Chart 4. The length of active water supply distribution network – as of 31 December



As of the end of 2021, the length of water supply distribution network reached in Poland over 316.7 thousand km, and the number of connections to residential buildings – over 6.0 million pcs. In comparison to 2020, the length of the constructed or reconstructed water supply distribution network increased by 3.3 thousand km (by 1.0%), with a simultaneous rise in the number of connections to residential buildings of 133.9 thousand pcs (of 2.3%).

Over 76.9% of the length of water supply distribution network and 62.0% of connections to residential buildings were located in rural areas. Compared to the previous year, the length of water supply distribution network increased in rural areas by 2.1 thousand km (by 0.9%), and the number of connections to residential buildings rose by 88.0 thousand pcs. In urban areas, almost 1.2 thousand km of network was built (an increase of 1.6%), and the number of connections rose by 45.9 thousand pcs (by 2.0%).

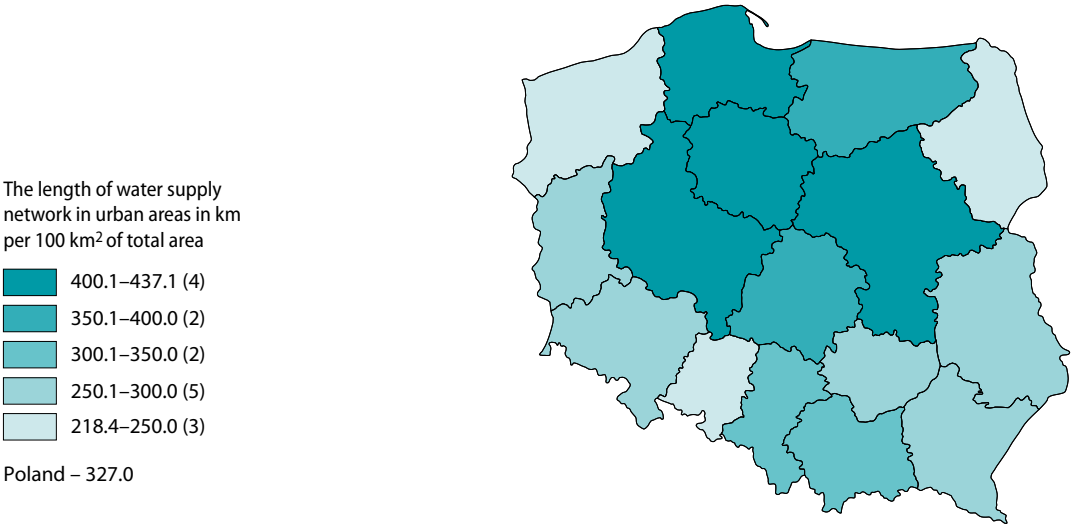
Chart 5. Growth in the length of water supply distribution network in the years 2010–2021



The density of water supply network per 100 km² – the indicator is a quotient obtained by dividing the length of water supply network by the area of surveyed surface, multiplied by 100.

Along with the development of water supply infrastructure in Poland, a systematic increase in the density of the network takes place. As of the end of 2021, the density of the network amounted to 101.3 km per 100 km^2 and, compared to the previous year, increased by 1.1 km per 100 km^2.

Map 7. The density of water supply distribution network in urban areas – as of 31 December 2021



The highest values of water supply distribution network density were observed in voivodships Śląskie – 181.2 km per 100 km^2 (an increase of 1.5 km per 100 km^2, compared to 2020), and Małopolskie – 144.5 km per 100 km^2 (an increase of 1.8 km per 100 km^2), whereas the lowest in voivodships Zachodniopomorskie – 50.6 km per 100 km^2 (an increase of 0.6 km per 100 km^2), and Lubuskie – 51.9 km per 100 km^2 (an increase of 0.6 km per 100 km^2).

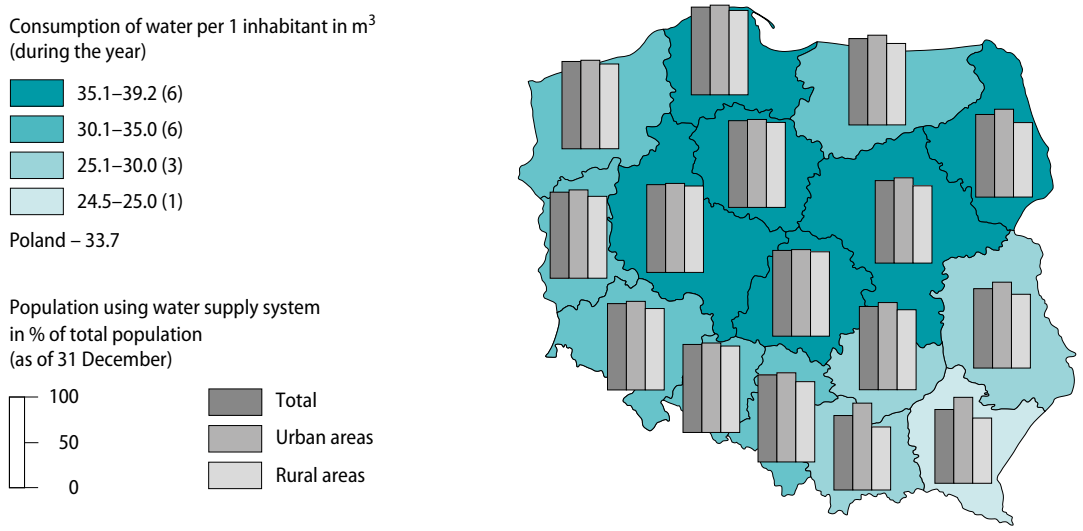
As of the end of 2021, the share of residential buildings connected to water supply network increased, compared to the previous year, and amounted to 85.2%. Both in urban and rural areas a rise in the share of residential buildings connected to water supply network was noted, by 0.2 percentage point and 1.2 percentage point, respectively.

The development of water supply system has contributed to an increase in the population using the above mentioned system. As of the end of 2021, 92.4% of total population was using water supply system (compared to 2010, an increase of 5.0 percentage points). In urban areas, 96.7% of the total population had access to water supply system (an increase of 1.4 percentage point, compared to 2010). In rural areas, the share of population using water supply system was at the level of 85.9% (compared to 2010, a rise of 10.8 percentage points).

Data regarding **population using water supply system**[1] include people living in residential buildings and collective accommodation buildings connected to water supply system.

1 See "Methodological notes", p. 51.

Map 8. Population using water supply system and consumption of water per 1 inhabitant in 2021



In the years 2010–2021, together with the increase in the number of persons having access to water supply system, the amount of water used per inhabitant rose by 8.4%.

Table 3. Population using water supply system and household consumption of water per 1 inhabitant

Specification	2010	2015	2019	2020	2021
Population using water supply system in % of total population (as of 31 December)	87.4	91.8	92.2	92.3	92.4
urban areas	95.3	96.5	96.6	96.7	96.7
Average water consumption per 1 inhabitant in m³ (during the year)	31.1	32.2	33.7	34.0	33.7
urban areas	35.0	34.3	35.3	35.8	35.3

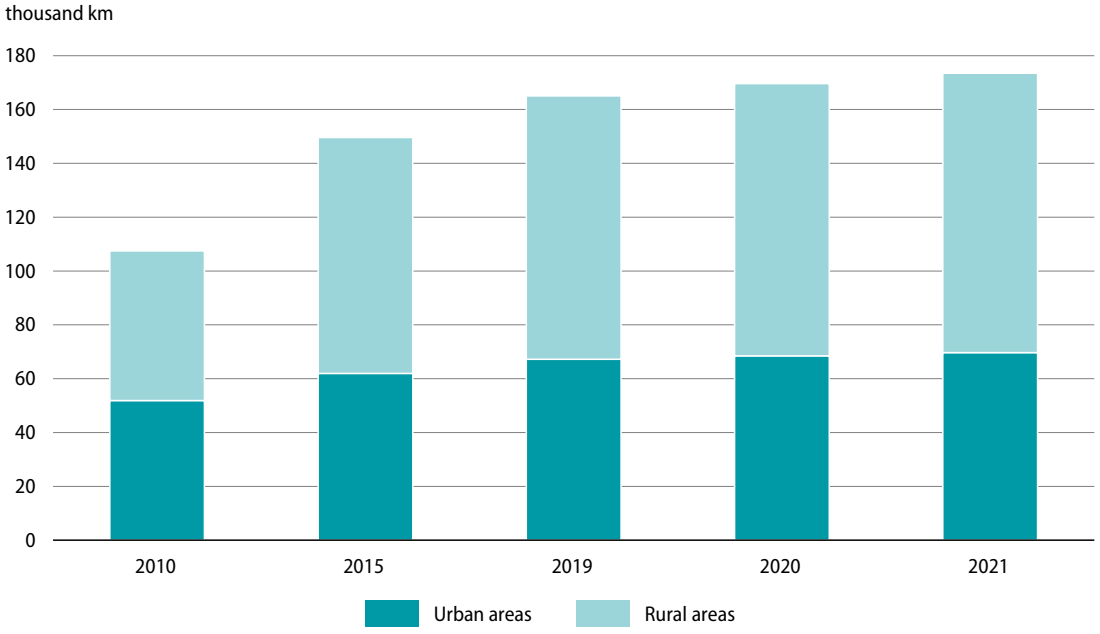
In 2021, household consumption of water amounted to 1,279.8 hm³ and, compared to the year before, fell by 20.2 hm³ (by 1.6%). The average water consumption by households in 2021 was 33.7 m³ per inhabitant, however 35.3 m³ in urban areas and 31.2 m³ in rural areas. Compared to 2020, consumption of water decreased by 0.3 m³. In urban areas there was a decrease in consumption of 0.5 m³, and in rural areas – of 0.2 m³. The highest decrease of water consumption was noted in voivodships Mazowieckie – of 1.8 m³ per inhabitant (in urban areas – of 1.8 m³, and in rural areas – of 1.7 m³) and in Wielkopolskie – of 0.6 m³ per inhabitant (in urban areas – of 0.5 m³, and in rural areas – of 0.8 m³).

1.2. Sewage infrastructure

Active sewage network – a system of covered (underground) conduits discharging sewage from buildings and other objects to collectors or sewage treatment facilities.

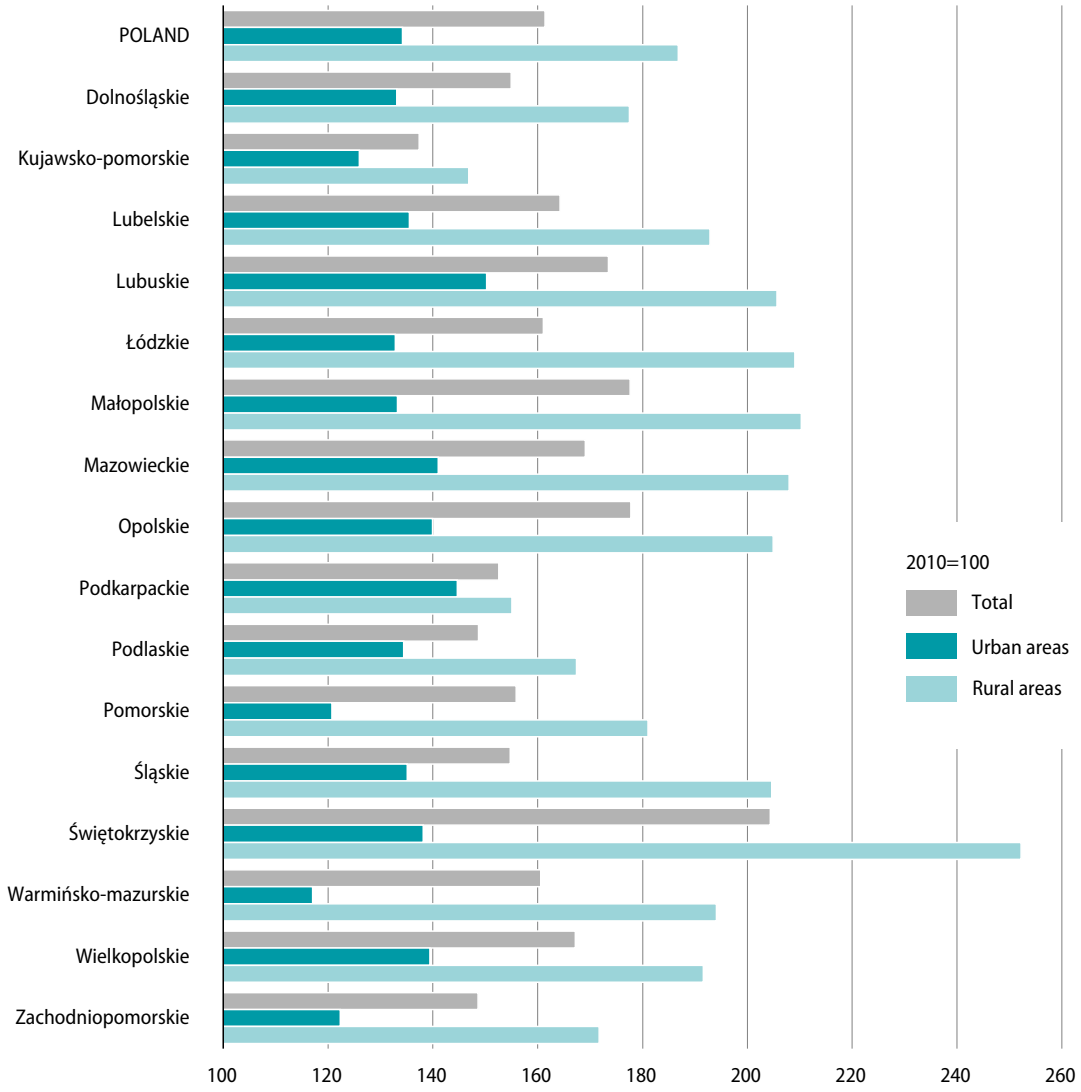
Sewage connection – a segment of conduit connecting internal sewage installations on a property of consumer with the sewage network, past a first inspection chamber from a building, and in the case of its lack – from a boundary of the property.

Chart 6. The length of active sewage network – as of 31 December



In the years 2010–2021 the length of sewage network in Poland increased by 66.0 thousand km (by 61.4%), reaching 173.5 thousand km as of the end of 2021. In rural areas, the rise of the length of the network was higher – of 48.2 thousand km (of 86.8%), and in urban areas an increase of 17.8 thousand km (of 34.2%) was recorded.

Chart 7. Growth in the length of sewage network in the years 2010–2021



Broken down by voivodships, the most significant increase in the length of sewage network in rural areas, compared to 2010, was recorded in Świętokrzyskie – of 152.2%, Małopolskie – of 110.3%, Łódzkie – of 109.1%, and Mazowieckie – of 108.0%. On the other hand, in urban areas the highest increase in the length of sewage network was observed in Lubuskie – of 50.3%, Podkarpackie – of 44.7%, and Mazowieckie – of 41.0%.

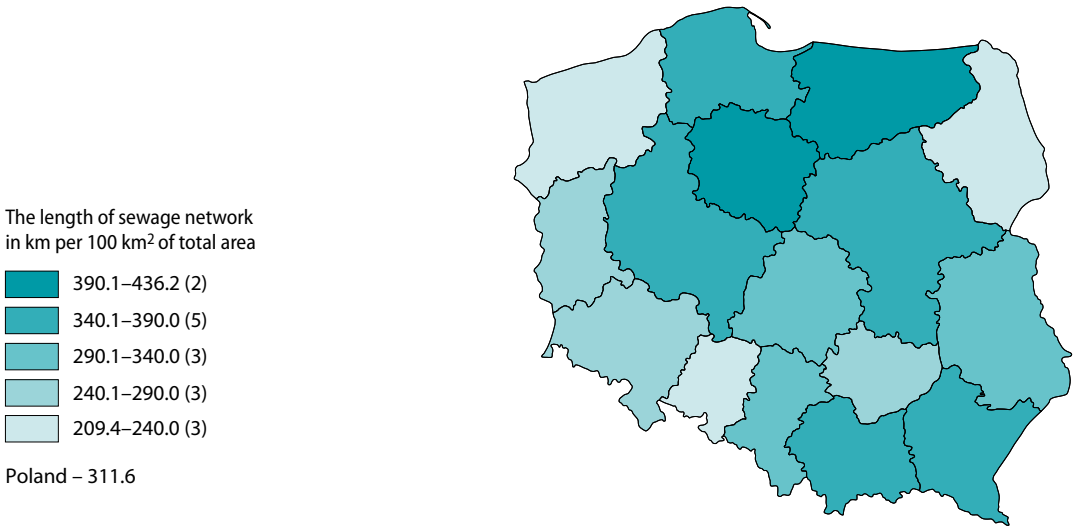
In 2021, the length of sewage network in Poland reached 173.5 thousand km, with the number of connections to residential buildings reaching almost 3.7 million pcs. In relation to 2020, the length of constructed or reconstructed sewage network increased by 3.9 thousand km, i.e. by 2.3%, with a simultaneous increase in the number of connections to residential buildings of 109.2 thousand pcs, i.e. of 3.0%.

In rural areas was located 59.8% of sewage network and 46.9% of connections to residential buildings. Compared to 2020, the length of sewage network in rural areas increased by 2.7 thousand km (by 2.6%), and the number of connections to residential buildings – by 66.2 thousand pcs (by 4.0%). In urban areas however, 1.2 thousand km of sewage network was built (an increase of 1.7%), and almost 43 thousand pcs of connections to residential buildings (an increase of 2.2%).

Compared to 2020, the largest increase in the total length of sewage network was recorded in voivodships: Świętokrzyskie – of 4.9% (in urban areas – of 1.9%), Wielkopolskie – of 3.3% (in rural areas – of 3.0%), and Podkarpackie – of 3.2% (in urban areas – of 1.8%), while the lowest in Podlaskie – of 0.9%, and Zachodniopomorskie – of 1.1%.

The density of sewage network per 100 km² – the indicator is a quotient obtained by dividing the length of sewage network by the area of surveyed surface, multiplied by 100.

Map 9. The density of sewage network in urban areas – as of 31 December 2021



The highest values of indicator of the sewage network density in 2021 were noted in voivodships: Śląskie – 143.1 km per 100 km², and Małopolskie – 117.1 km per 100 km², while the lowest in voivodships: Podlaskie – 18.8 km per 100 km², and Lubelskie – 29.0 km per 100 km².

As of the end of 2021, the percentage of residential buildings connected to sewage network was 52.7%, and compared to 2020, was higher by 0.9 percentage point. In urban areas, 75.5% of residential buildings were connected to sewage network, while in rural areas – 39.1% of buildings.

The percentage of population using sewage system in the years 2010–2021 increased from 62.0% to 71.9% (of 9.9 percentage points). In urban areas, as of the end of 2021, 90.7% of the total population was using sewage system (an increase of 4.6 percentage points), and in rural areas – 43.8% (an increase of 19.0 percentage points).

Data regarding **population using sewage system**[2] include people living in residential buildings and collective accommodation buildings connected to sewage system.

2 See "Methodological notes", p. 51.

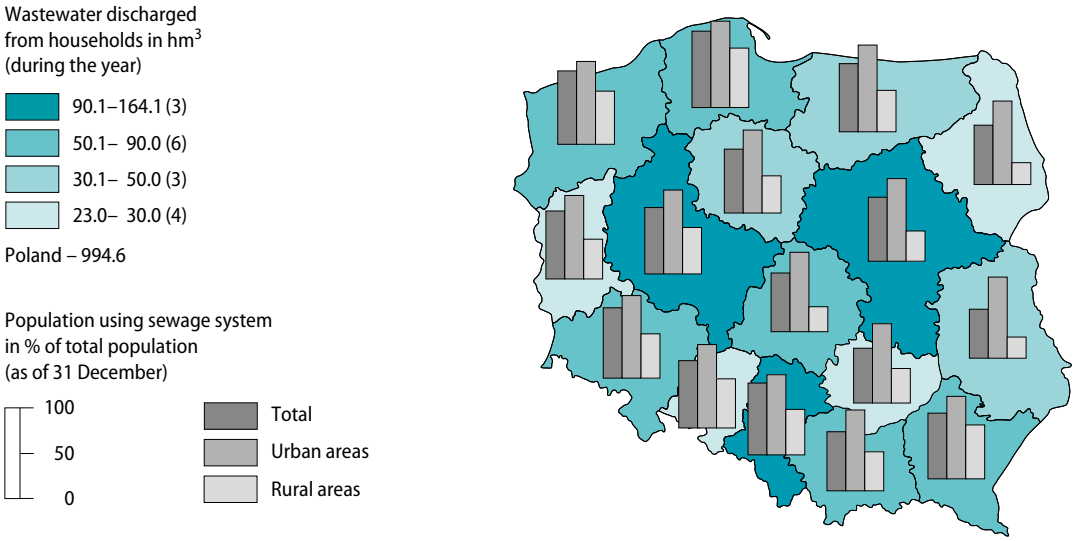
Table 4. Population using sewage system and the amount of wastewater discharged from households

Specification	2010	2015	2019	2020	2021
Population using sewage system in % of total population (as of 31 December)	62.0	69.7	71.2	71.5	71.9
urban areas	86.1	89.8	90.5	90.6	90.8
Wastewater discharged from households by sewage system in hm^3 (during the year)	901.6	926.1	979.5	1 002.6	994.6

Wastewater discharged – domestic wastewater or the mixture of domestic wastewater with industrial wastewater or rainfall or thaw – discharged to sewage system.

The amount of wastewater discharged from households in 2021 was 994.6 hm^3 (in urban areas – 857.5 hm^3, and in rural areas – 137.1 hm^3) and decreased, compared to 2020, by 7.9 hm^3 (in urban areas by 12.1 hm^3 and by 4.2 hm^3 in rural areas).

Map 10. Population using sewage system and the amount of wastewater discharged from households in 2021

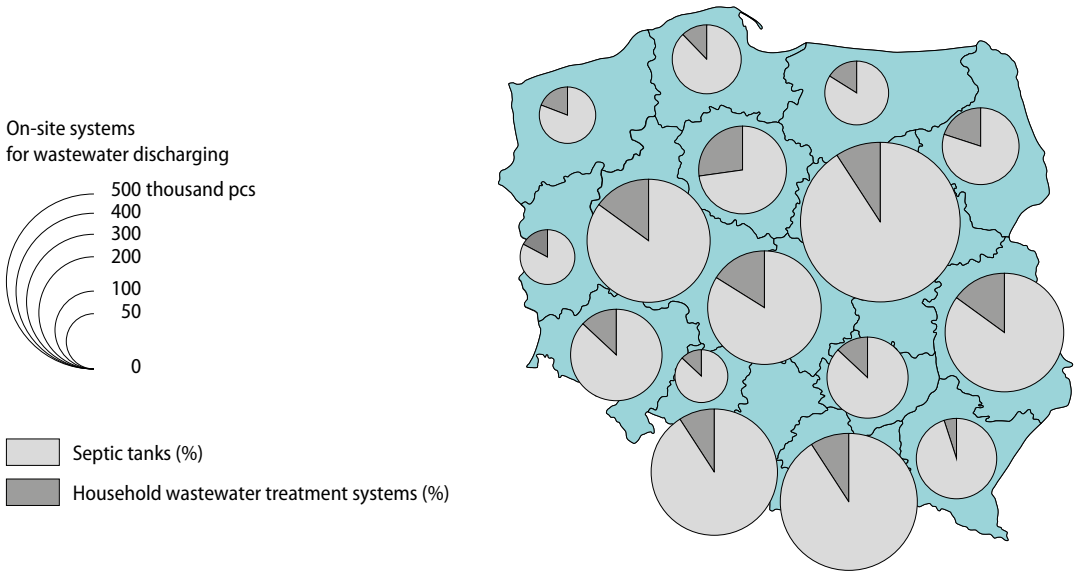


Residents of properties located in areas with underdeveloped sewage infrastructure use independent systems for removal of sewage – septic tanks or household wastewater treatment systems. These systems are an alternative solution to the construction of sewage systems discharging sewage to sewage treatment plants in cases where connecting all properties to sewage systems is impossible or would result in excessive costs. In Poland, as of the end of 2021, there were 2,440.1 thousand pcs of on-site systems for discharging of wastewater, of which 87.0% were septic tanks.

Septic tank – an installation and device intended for an accumulation of liquid waste where it is generated.

Household wastewater treatment system – a complex of devices intended for treatment of sewage produced in one or more households.

Map 11. On-site systems for discharging of wastewater – as of 31 December 2021



The number of septic tanks decreased from about 2,131 thousand pcs, as of the end of 2020, to about 2,123 thousand pcs as of the end of 2021 (by 0.4%), whereas the number of household wastewater treatment systems increased from around 296 thousand pcs, as of the end of 2020, to around 317 thousand pcs as of the end of 2021 (by 7.3%). The majority (87.0%) of household wastewater treatment systems were located in rural areas – as of the end of 2021 it was 87.0% of the total number of household wastewater treatment systems.

Table 5. On-site systems for discharging of wastewater – as of 31 December

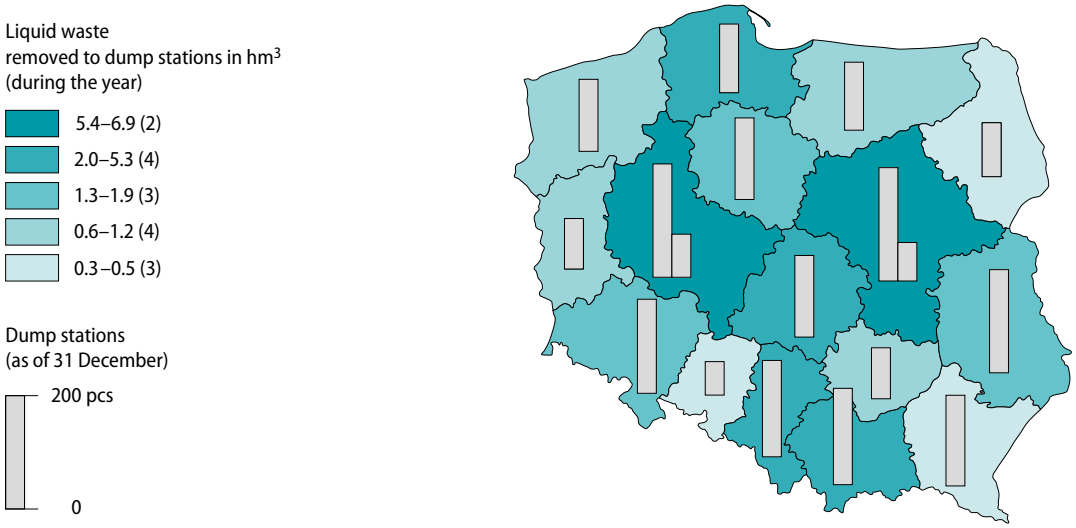
Specification	2010	2015	2019	2020	2021
On-site systems for discharging of wastewater in thousand pcs	**2,487.4**	**2,339.0**	**2,422.9**	**2,426.3**	**2,440.1**
urban areas	450.2	356.2	318.6	321.0	317.0
rural areas	2,037.2	1,982.8	2,104.3	2,105.3	2,123.1
Septic tanks in thousand pcs	**2,406.8**	**2,136.2**	**2,143.8**	**2,130.7**	**2,123.1**
urban areas	441.2	339.0	296.4	297.8	292.4
rural areas	1,965.6	1,797.1	1,847.4	1,833.0	1,830.7
Household wastewater treatment systems in thousand pcs	**80.6**	**202.8**	**279.1**	**295.5**	**317.0**
urban areas	9.0	17.2	22.2	23.2	24.6
rural areas	71.6	185.6	256.9	272.4	292.4

Liquid waste – sewage stored temporarily in septic tanks or settlements chambers of household wastewater treatment systems.

Dump station – an installation and device, placed near a sewer or a wastewater treatment plant, intended for collecting of liquid waste, transported by sewage disposal vehicles from where it is accumulated.

Domestic sewage stored temporarily in septic tanks is collected by municipal organisational units, or companies conducting activities in the scope of emptying septic tanks and transporting liquid waste, on the basis of a permit granted pursuant to the provisions of the Act of 13 September 1996 on Maintaining Cleanliness and Order in Municipalities, and is afterwards entered into dump stations. In 2021, the amount of 31.7 hm^3 of domestic liquid waste was collected (an increase of 6.3% compared to the previous year), which corresponded to 2.7% of the volume of domestic sewage discharged through sewage system to wastewater treatment plants (by 0.4 percentage point more, compared to the previous year).

Map 12. Dump stations and domestic liquid waste removed to dump stations in 2021



The number of operational dump stations, as of the end of 2021, increased by 0.9%, compared to the previous year, and amounted to 2,381 pcs. The majority (66.1%) of dump stations was located in rural areas. In 2021, the amount of liquid waste collected from rural areas constituted 70.9 % of the total amount, whereas 29.1% of total domestic liquid waste collected originated from urban areas (in the previous year – 70.3% and 29.7%, respectively).

Table 6. Domestic liquid waste collected

Specification	2010	2015	2019	2020	2021
	in hm^3				
Total (during the year)	**24.6**	**23.0**	**27.2**	**29.8**	**31.7**
urban areas	9.6	7.8	8.1	8.9	9.2
rural areas	15.1	15.1	19.1	21.0	22.5

Chapter 2

Gas supply infrastructure

Gas supply network – a system of conduits providing gaseous fuels to consumers by enterprises, which scope of economic activity is transmission and distribution of gas.

The system of conduits consists of:

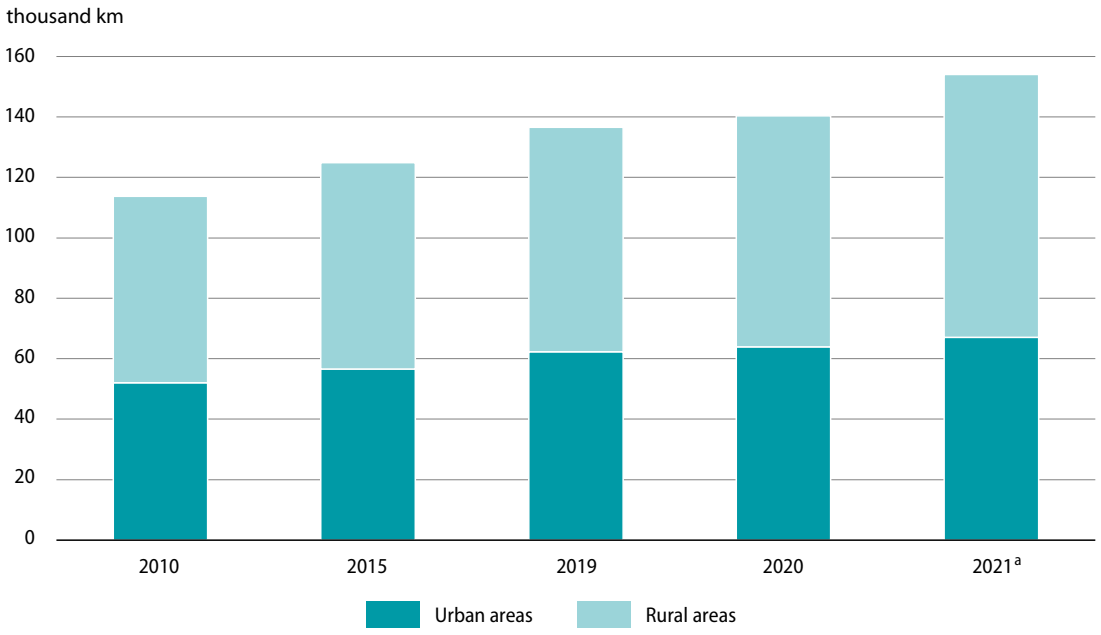
- transmission and distribution network (with high-methane gas, and nitrogenised gas) – street conduits intended for distribution of gas to buildings or other objects by means of connections;
- connections – a system of conduits joining distribution network with buildings, and other objects.

As of the end of 2021, the total length of gas supply network in Poland reached 165.7 thousand km, of which 92.9% (154.0 thousand km) comprised the length of distribution network. Compared to the previous year, an increase in the total length of the gas supply network was noted – of 2.2% (of 3.6 thousand km).

The length of active gas connections leading to buildings amounted to 55.0 thousand km, as of the end of 2021, an increase of 2.1%, compared to the end of the previous year. The number of connections, however, was characterised by a faster growth pace (of 4.0%) and, as of the end of 2021, amounted to 3,285.3 thousand pcs.

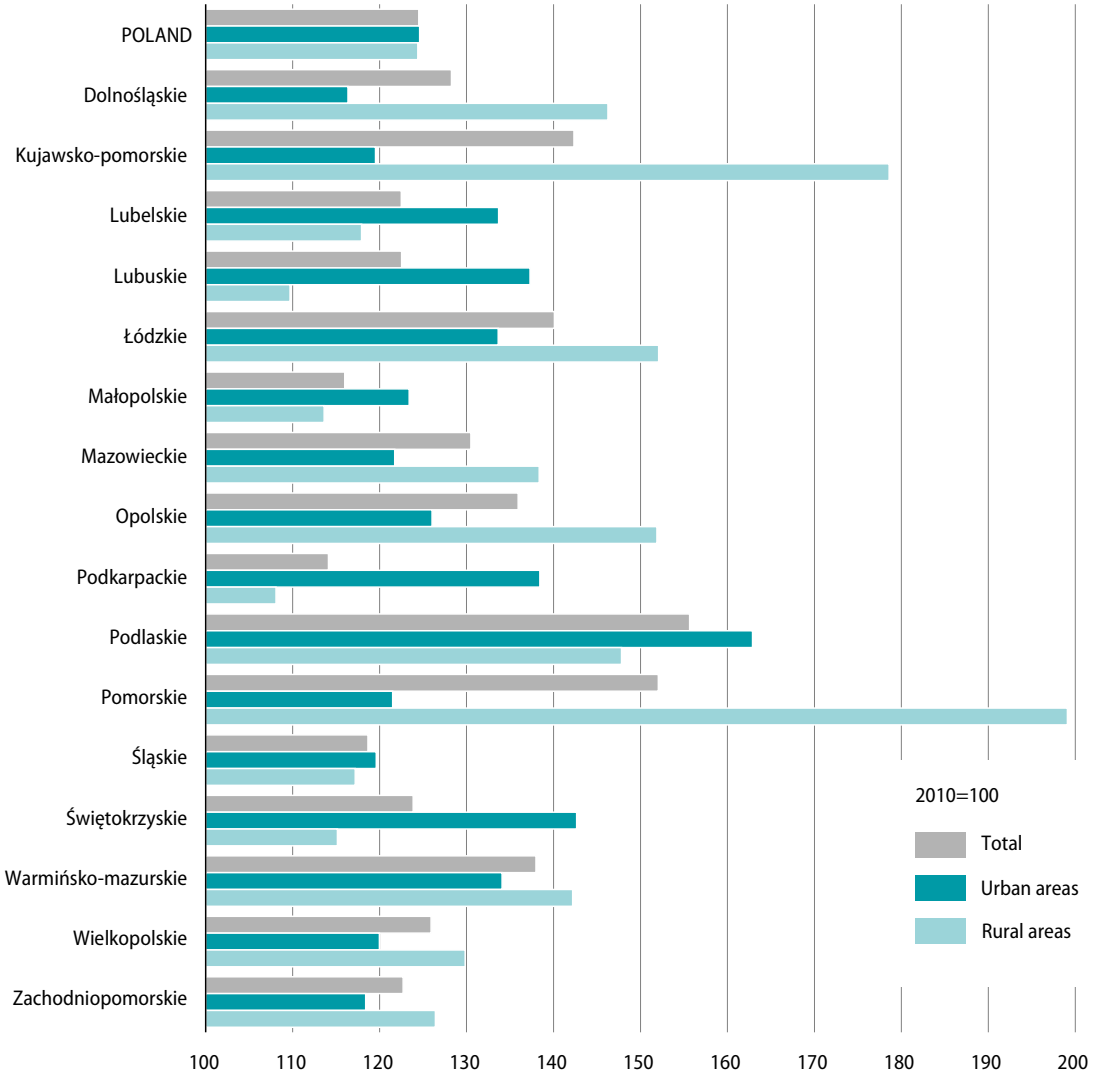
Out of the total number of 125.8 thousand pcs of connections installed in 2021, 58.9 thousand pcs was in urban areas, whereas 66.9 thousand pcs in rural areas.

Chart 8. The length of active gas distribution network – as of 31 December



a Until 2020 distribution network with a pressure of more than 0.5 MPa included in transmission network.

Chart 9. Growth in the length of gas supply network in the years 2010–2021



In comparison with 2010, a significant growth in the length of gas network was observed in urban areas of voivodships: Podlaskie (of 62.9%), Świętokrzyskie (of 42.7%), and Podkarpackie (of 38.4%), as well as in rural areas of voivodships: Pomorskie (of 99.1%), Kujawsko-pomorskie (of 78.6%), and Łódzkie (of 52.1%).

Map 13. The density of gas supply distribution network in urban areas – as of 31 December 2021

Data on **gas users**[3] concern the population in dwellings equipped with gas supply installations.

As of the end of 2021, the percentage of the total population using gas supply system increased by 0.6 percentage point, compared to 2020, and amounted to 54.8%. In urban areas, gas supply system was used by 72.3% of the total population (by 0.1 percentage point more than in the previous year), while in rural areas inhabitants using gas supply system constituted 28.8% of the total population (by 1.4 percentage points more than in the previous year).

Table 7. Population using gas from gas supply system and household consumption of gas

Specification	2010	2015	2019	2020	2021
Consumers of gas from gas supply system in % of total population (as of 31 December)	52.5	52.1	52.9	54.2	54.8
urban areas	72.9	71.6	71.4	72.2	72.3
Consumption of gas from gas supply system per 1 inhabitant in kWh (during the year)	110.0[a]	1,060.3	1,246.7	1,317.3	1,564.4
urban areas	145.9[a]	1,369.6	1,557.1	1,620.5	1,845.5

a In m^3.

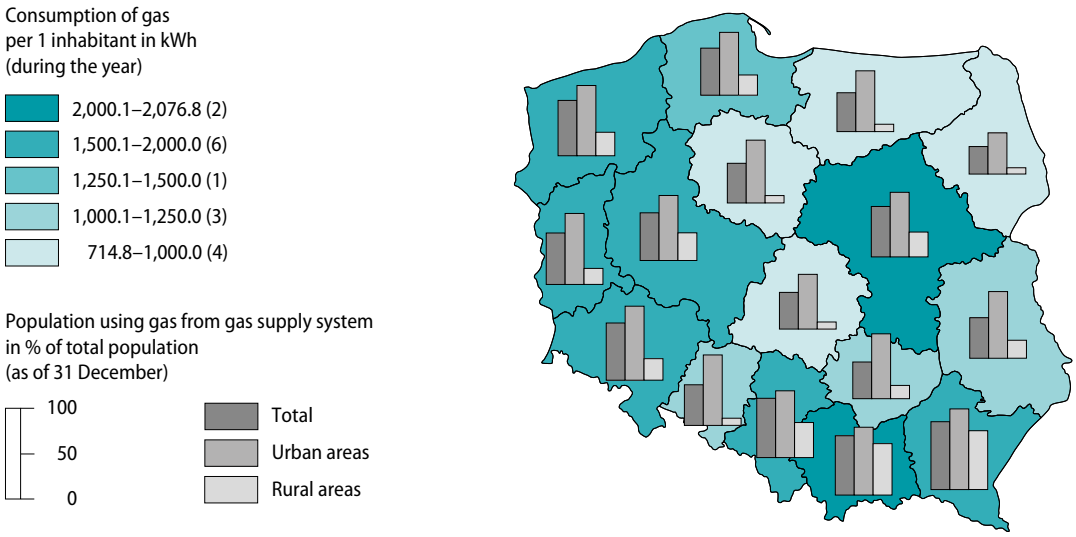
Data regarding the **number of consumers of gaseous fuels** come from entities that have concessions for gas trade and are based on the number of contracts with consumers of gas from gas supply system.

In 2021, in Poland, household consumption of gas from gas supply system amounted to 59,431.5 GWh and, compared to 2020, increased by 18.2% (by 9,138.2 GWh), with a simultaneous rise in the number of consumers – of 2.5%. In urban areas, gas consumption increased by 13.0%, whereas the number of consumers rose by 1.7%. In urban areas there was noted an increase in gas consumption of 32.5%, while the number of consumers rose by 7.1%.

3 See "Methodological notes", p. 51.

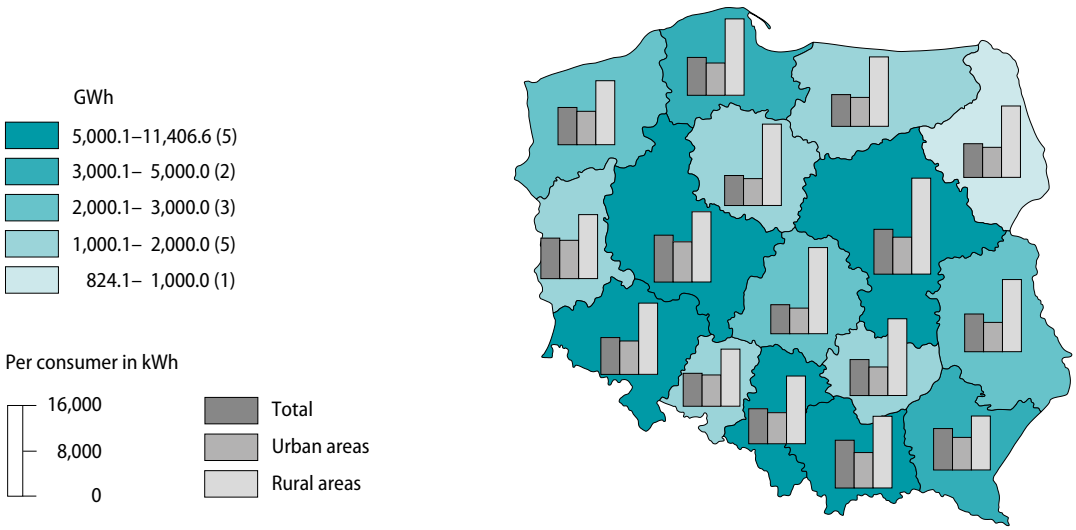
In 2021, compared with the previous year, the average household consumption of gas from gas supply system increased by 15.3% and amounted to 6,951.7 kWh per consumer, though in urban areas it was 5,847.6 kWh per consumer (an increase of 11.2%), whereas in rural areas – 12,672.0 kWh per consumer (a rise of 23.8%).

Map 14. Population using gas from gas supply system and consumption of gas per 1 inhabitant in 2021



The highest average household consumption of gas from gas supply system was recorded in voivodships Małopolskie (8,447.2 kWh per consumer) and Wielkopolskie (8,278.0 kWh per consumer), while the lowest in Łódzkie (5,116.3 kWh per consumer) and Kujawsko-pomorskie (5,298.9 kWh per consumer).

Map 15. Sale of gas from gas supply system to households in 2021



Chapter 3

Heating infrastructure

Heating transmission network – a system of conduits transmitting heating medium to distribution conduits.

Heating distribution network – a system of distribution conduits transmitting heating medium to connections to buildings.

Connections to buildings – sections of heating network supplying heat only to one central heating substation or a section of external installation past central heating substation or heat source, joining these installations with receiving installations in buildings.

The density of heating network per 100 km² – the indicator is a quotient obtained by dividing the length of heating network by the area of surveyed surface, multiplied by 100.

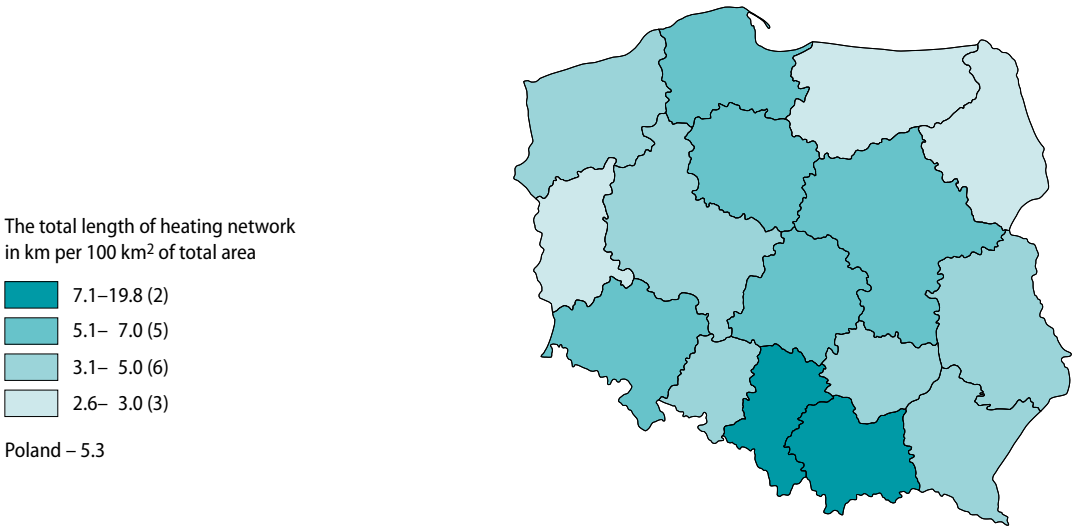
The total length of heating network, as of the end of 2021, amounted to 25,238.7 km, of which 65.5% accounted for transmission and distribution network (16,524.8 km), and 34.5% for connections to buildings (8,713.9 km). The number of boiler houses, as of the end of 2021, amounted to 35,189 pcs, while their total available capacity was 41,214.8 MW.

Table 8. Heating system infrastructure and sale of heating energy

Specification	2010	2015	2019	2020	2021
Heating network total in km (as of 31 December)	**23,666**	**24,688**	**25,251**	**25,326**	**25,239**
Heating transmission and distribution network in km (as of 31 December)	15,633	15,932	16,381	16,573	16,525
Connections to buildings in km (as of 31 December)	8,033	8,757	8,869	8,752	8,714
Boiler houses in pcs (as of 31 December)	**14,458**	**23,816**	**33,858**	**34,197**	**35,189**
Sale of heating energy in thousand TJ (during the year)	**224.7**	**186.4**	**191.2**	**183.7**	**211.7**
of which to residential buildings in thousand TJ (during the year)	189.7	147.2	148.6	145.3	166.5

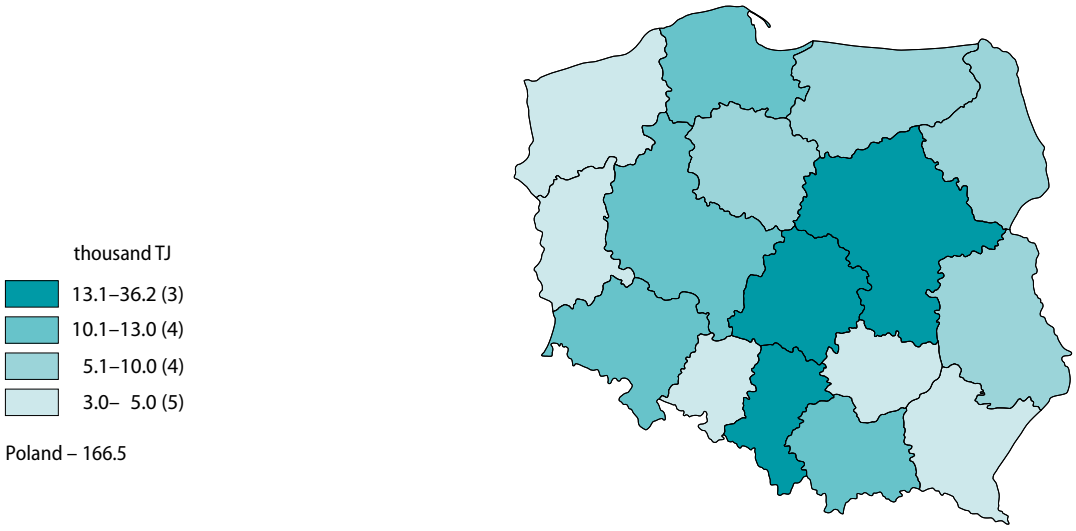
The density of heating network in Poland, as of the end of 2021, amounted to 5.3 km per 100 km². The highest density of heating network occurred in voivodships: Śląskie (19.8 km per 100 km²), Małopolskie (9.0 km per 100 km²), Pomorskie and Łódzkie (6.8 km per 100 km², each), and Mazowieckie (6.4 km per 100 km²), whereas the lowest – in voivodships: Podlaskie (2.6 km per 100 km²), Lubuskie and Warmińsko-mazurskie (2.7 km per 100 km², each), and Zachodniopomorskie (3.1 km per 100 km²).

Map 16. The density of heating network – as of 31 December 2021



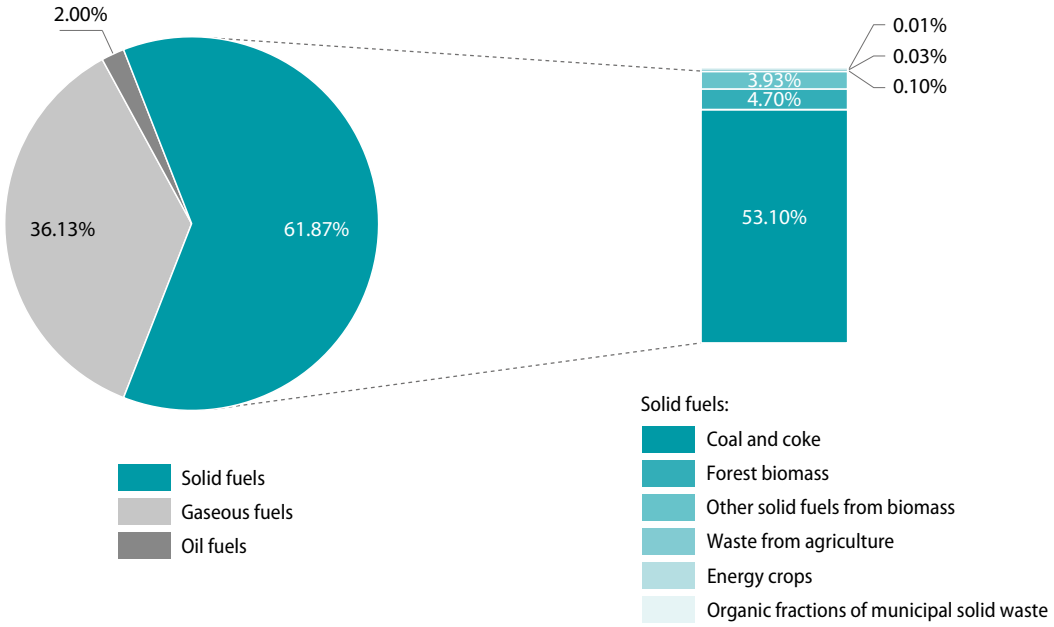
In 2021, sale of heating energy amounted to 211.7 thousand TJ, of which 166.5 thousand TJ (78.6%) was for the purpose of heating of residential buildings. Most of heating energy was sold to inhabitants of urban areas – 98.6% (208.7 thousand TJ), of which 164.6 thousand TJ for purposes of heating of residential buildings.

Map 17. Sale of heating energy for purpose of heating of residential buildings in 2021



In the structure of production of heating energy for heating purposes, the largest share in 2021 was represented by solid fuels (61.9%) and gaseous fuels (36.1%), whereas the least energy was produced using oil fuels (2.0%).

Chart 10. Types of fuels used for production of heating energy for heating purposes in 2021



Chapter 4

Electric energy

Information on **number of consumers and consumption of electricity** concern households and collective accommodation establishments with complex agreements or distribution service contracts.

Data on consumption of electricity were stated on the basis of advance payments made by consumers.

Household consumption of electric energy in Poland in 2021 increased slightly compared to the previous year (by 0.4%) and reached the level of 31,647.1 GWh, however in urban areas consumption rose by 0.1% and amounted to 18,516.4 GWh, whereas in rural areas increased by 0.7% – to the level of 13,130.7 GWh.

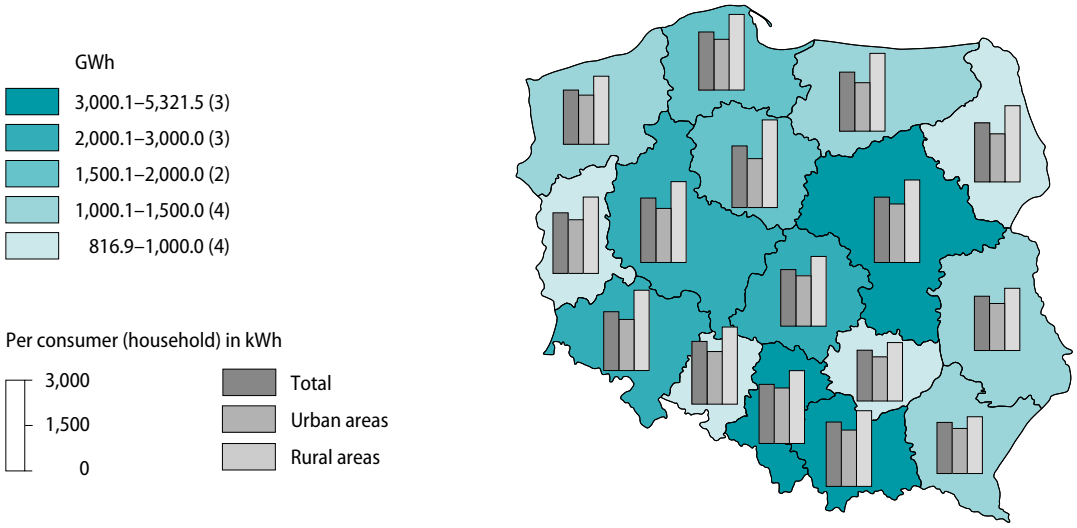
Table 9. Consumers and consumption of electric energy in households

Specification	2010	2015	2019	2020	2021
Consumers (households) in thousands (as of 31 December)	14,178.5	14,468.0	15,588.0	15,799.2	15,983.9
urban areas	9,409.4	9,591.7	10,399.3	10,555.9	10,630.7
rural areas	4,769.1	4,876.4	5,188.7	5,243.3	5,353.2
Consumption of electric energy in GWh (during the year)	29,774.4	28,314.8	30,613.2	31,534.8	31,647.1
urban areas	18,406.1	16,882.7	17,934.5	18,499.0	18,516.4
rural areas	11,368.3	11,432.1	12,678.7	13,035.8	13,130.7
Consumption of electric energy per consumer in kWh (during the year)	2,100.0	1,957.1	1,963.9	1,996.0	1,979.9
urban areas	1,956.1	1,760.1	1,724.6	1,752.5	1,741.8
rural areas	2,383.7	2,344.4	2,443.5	2,486.2	2,452.9
Consumption of electric energy per inhabitant in kWh (during the year)	773.0	736.3	797.5	826.0	833.0
urban areas	785.4	727.6	777.9	808.8	815.5
rural areas	753.8	749.6	826.9	851.8	859.1

In 2021, compared to the previous year, household consumption of electric energy per consumer in Poland decreased by 0.8% and amounted to 1,979.9 kWh, however in urban areas it was 1,741.8 kWh (a decrease of 0.6%), and in rural areas 2,452.9 kWh (a decrease of 1.3%).

The highest household consumption of electric energy per consumer was recorded in voivodships Mazowieckie (2,159.7 kWh) and Wielkopolskie (2,131.1 kWh), while the lowest in voivodships Świętokrzyskie (1,680.3 kWh) and Podkarpackie (1,689.0 kWh).

Map 18. Household consumption of electric energy in 2021



Chapter 5

Municipal waste management

Municipal waste – waste generated in households, excluding discarded vehicles, as well as waste generated by other producers of waste which because of its character or composition is similar to waste from households.

In 2021, in Poland, 13,673.6 thousand tonnes of municipal waste was generated, by 4.2% more, compared to the previous year. Municipal waste generated per one inhabitant of Poland averaged 360 kg (by 16 kg more than in the previous year), however in urban areas it was 409 kg (by 17 kg more than in the previous year), and 288 kg in rural areas (by 16 kg more than in the previous year). The most of municipal waste per one inhabitant was generated in voivodships: Dolnośląskie (435 kg), Zachodniopomorskie and Śląskie (409 kg, each), and Lubuskie (408 kg); while the least per one inhabitant in voivodhisps: Podkarpackie (250 kg), Lubelskie (265 kg), Świętokrzyskie (275 kg), and Podlaskie (304 kg).

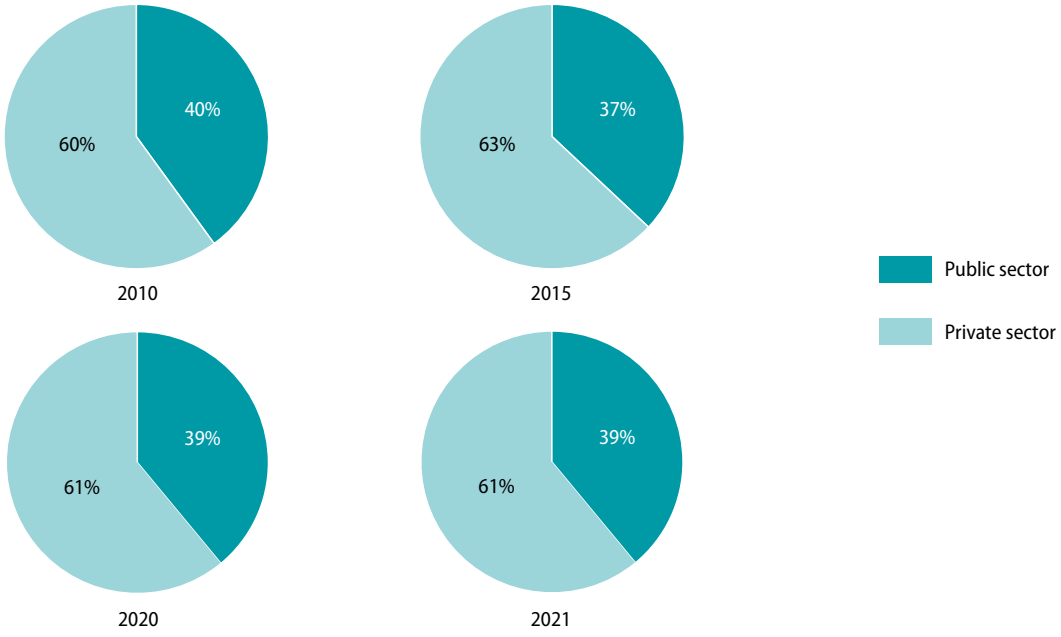
Table 10. Municipal waste collected per 1 inhabitant

Specification	2010	2015	2019	2020	2021
	kg per 1 inhabitant				
Municipal waste collected, total	**261**	**283**	**332**	**344**	**360**
Municipal waste collected, mixed	238	217	229	213	217
Municipal waste collected separately	22	66	104	130	143

Municipal waste generated – due to the fact that since 1.07.2013, all real estate owners are covered by municipalities with municipal waste management system, starting from data for 2014, the amount of waste collected is deemed to be waste generated.

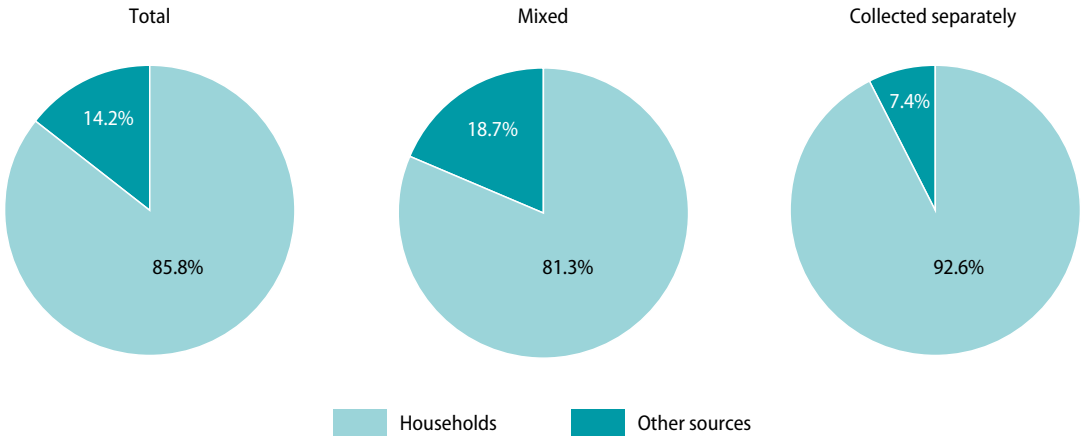
In 2021, private entities collected 61.1% of municipal waste (61.2% in 2020). Foreign owned entities collected 7.2% of municipal waste (7.3% in 2020).

Chart 11. Municipal waste generated, by ownership sector of waste collectors



In 2021, households generated 85.8 % of municipal waste (11,732.3 thousand tonnes). This amount increased by 3.9%, compared to the previous year. The remaining part of municipal waste collected, among others, under the provision of municipal services such as street cleaning or maintenance of parks or cemeteries, amounted to 1,941.3 thousand tonnes (an increase of 6.2%, compared to the previous year) and constituted 14.2% of the total mass of municipal waste generated in 2021. The share of these sources of origin of the municipal waste generated in 2020 accounted for 86.1% and 13.9%, respectively.

Chart 12. Sources of origin of municipal waste collected in 2021

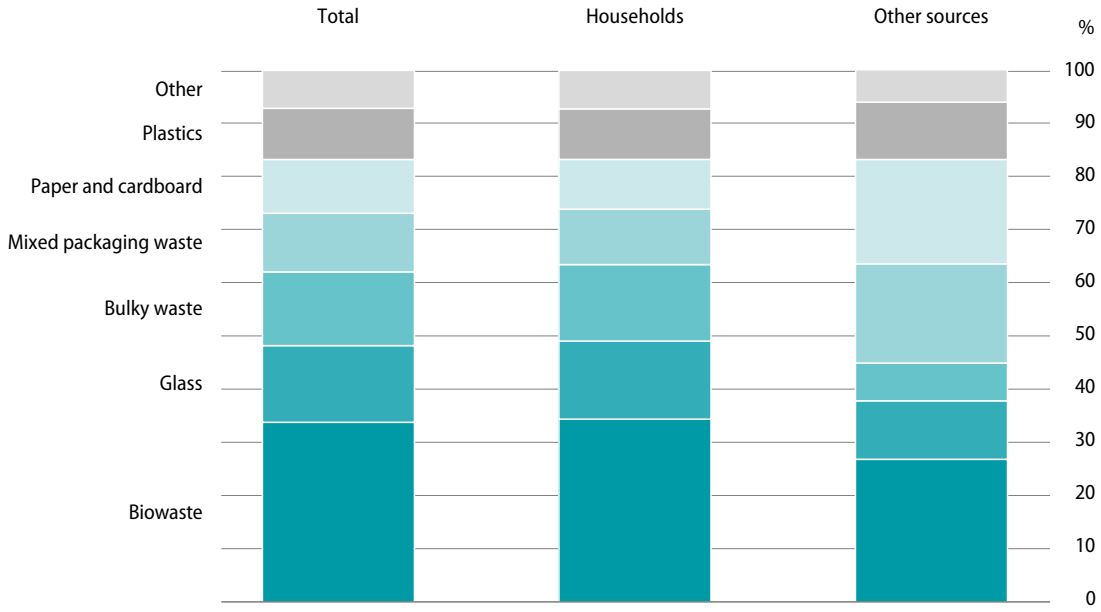


In 2021, there was recorded an increase in the share of waste collected separately in the total amount of municipal waste generated – to 39.8%, from 37.9% in 2020. The total weight of waste collected separately increased from about 4,975 thousand tonnes in 2020 to around 5,440 thousand tonnes in 2021 (by 9.3%).

Municipal waste collected separately per one inhabitant of Poland averaged 143 kg (the year before – 130 kg), however in urban areas it was 158 kg, and in rural areas – 122 kg (the year before – 145 kg and 109 kg, respectively).

The most (92.6%) of municipal waste collected separately in 2021 was generated by households. Compared to the previous year, the amount of this waste increased by 9.4% – from 4,603.4 thousand tonnes to 5,038.0 thousand tonnes. These were mainly biowaste, glass waste, bulky waste, and mixed packaging waste – these fractions accounted for 73.9% of the total municipal waste collected separately, generated by households in 2021.

Chart 13. Municipal waste collected separately, by fractions and sources of origin in 2021



Waste originating from other sources, collected, among others, under the provision of municipal services related to maintaining cleanliness and order in municipalities (of which 63.7% was biowaste, paper and cardboard, mixed packaging waste, and glass waste) accounted for 7.4% of the amount of municipal waste collected separately, and it's weight increased by 8.2% – from 371.2 thousand tonnes to 401.6 thousand tonnes.

In 2021, the amount of separately collected glass waste was 20.6 kg per one inhabitant, an increase of 27.3%, in comparison to the previous year. The average amount of separately collected plastic waste per one inhabitant of Poland in 2021 was 13.7 kg (an increase of 24.2%, in comparison to the amount of 12.8 kg in 2020), and 14.5 kg of paper and cardboard waste (13.0 kg in 2020, a rise of 42.9%). The amount of collected separately biowaste per one inhabitant increased also – from 41.9 kg in 2020 to 48.5 kg in 2021 (by 34.4%), as well as the amount of bulky waste – from 18.5 kg to 19.8 kg (by 15.1%).

Table 11. Fractions of municipal waste collected separately per 1 inhabitant

Municipal waste collected separately	2010	2015	2019	2020	2021
	kg per 1 inhabitant				
Total	**22.3**	**66.0**	**103.6**	**129.6**	**143.0**
Paper and cardboard	4.4	6.3	9.1	13.0	14.5
Glass	5.6	11.0	15.0	19.1	20.6
Plastics	3.2	7.9	10.3	12.8	13.7
Mixed packaging	.	10.9	12.7	14.2	15.8
Bulky waste	2.7	6.8	16.1	18.5	19.8
Biowaste	4.7	17.1	31.2	41.9	48.5

Municipal waste separate collection facility – a stationary place where various types of municipal waste, e.g. paper and cardboard, glass, composite packaging, plastics or biowaste can be handed over.

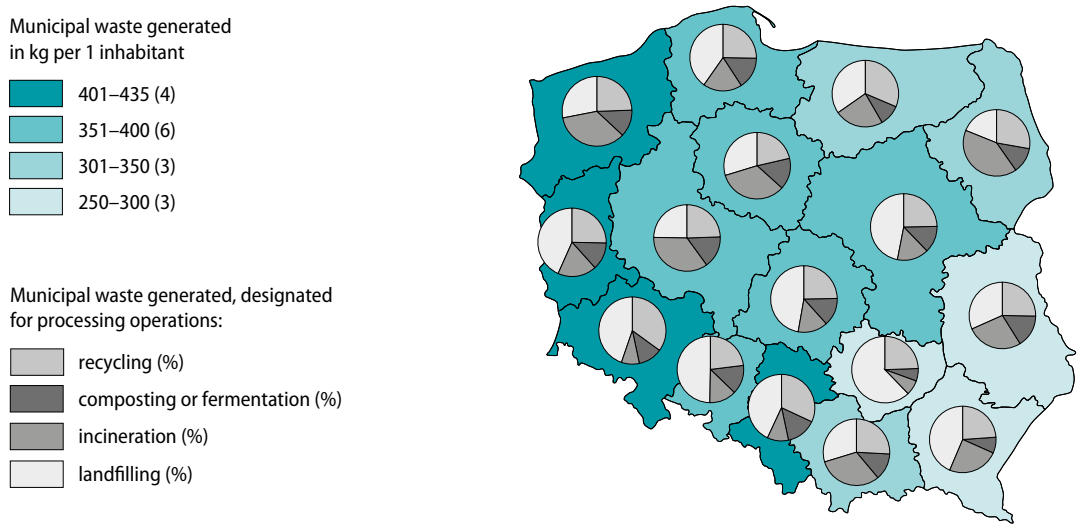
As of the end of 2021, in Poland there was 2,279 public facilities of separate waste collection (by 1.8% more than in the previous year), of which 827 (36.3%) were located in urban areas, and 1,452 (63.7%) in rural areas.

Recovery of waste – any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy.

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

More than half (60.0%) of the municipal waste generated in 2021 was designated for recovery operations (8,207.0 thousand tonnes), of which 3,680.7 thousand tonnes of municipal waste was intended for recycling (26.9% of the amount of municipal waste generated). These were both municipal waste collected separately and raw material waste sorted from mixed municipal waste. In the previous year, 3,498.6 thousand tonnes of waste sent for recycling represented 26.7% of the amount of municipal waste generated.

Map 19. Municipal waste management in 2021



As much as 1,824.3 thousand tonnes of municipal waste was directed to biological treatment processes (composting or fermentation). These were mainly biowaste from gardens, parks, and cemeteries, waste from market places, biodegradable kitchen waste, and waste from gastronomy. In comparison with the previous year, the share of waste intended for such treatment in the total amount of municipal waste generated increased by 1.3 percentage point to the level of 13.3%.

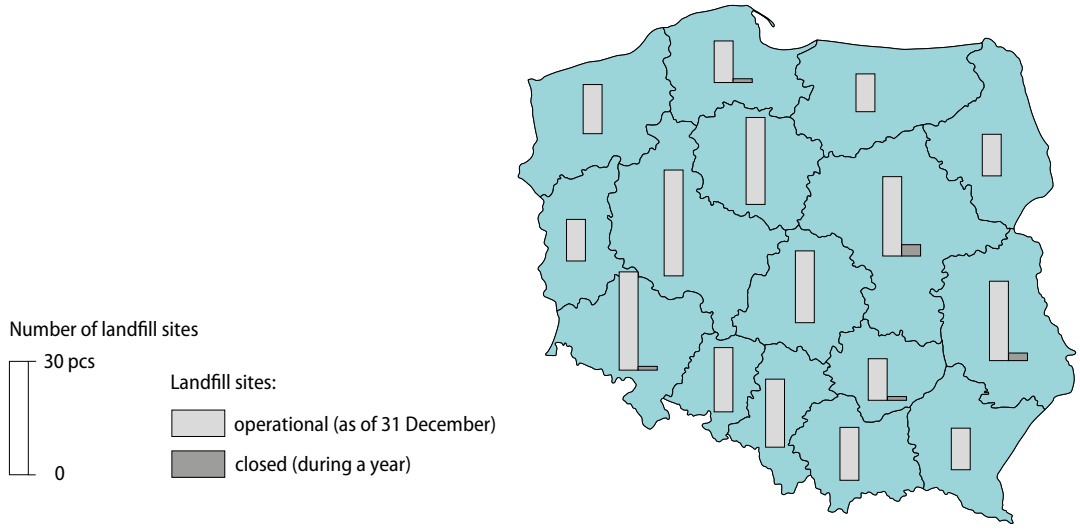
Municipal waste directed for incineration with energy recovery amounted to 2,702.0 thousand tonnes, which was 19.8% of the total amount of municipal waste generated, by 0.5 percentage point less than in the previous year. In 2020, there was 2,656.2 thousand tonnes sent for this type of recovery.

Table 12. Municipal waste treatment

Specification	2010	2015	2019	2020	2021
Municipal waste directed to recovery operations, in thousand tonnes	**1,965**	**4,845**	**7,087**	**7,733**	**8,207**
material recycling	1,783	2,867	3,192	3,499	3,681
organic recycling (composting or fermentation)	181	661	1,153	1,578	1,824
incineration with energy recovery	–	1,318	2,742	2,656	2,702
Municipal waste intended for disposal operations, in thousand tonnes	**8,076**	**6,018**	**5,666**	**5,384**	**5,467**
landfilling	8,037	5,897	5,487	5,218	5,296
incineration without energy recovery	39	121	179	166	171

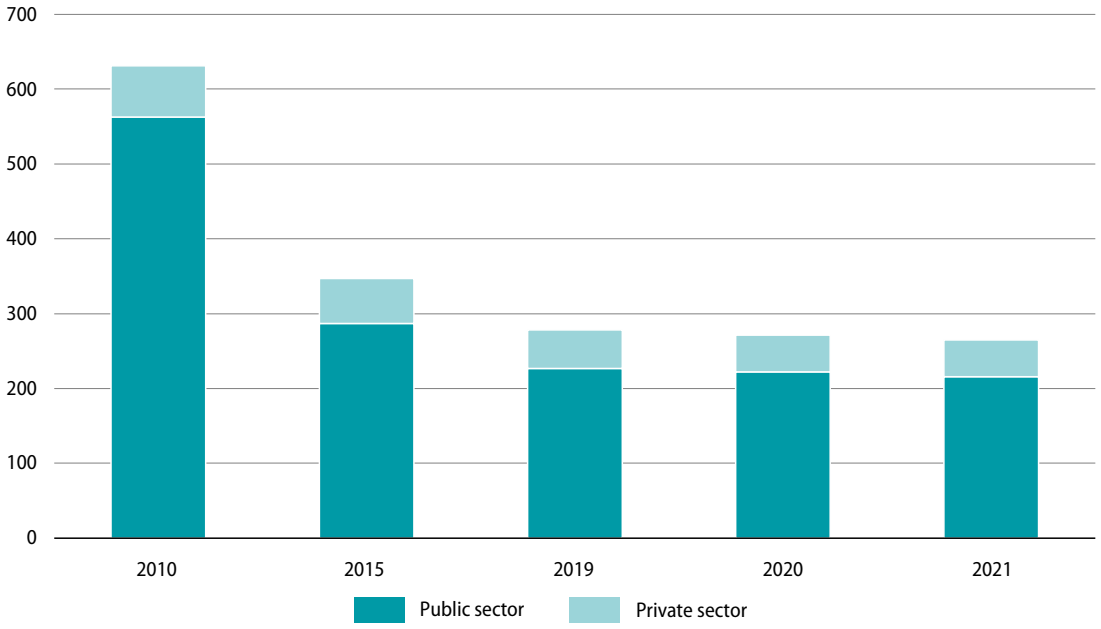
A total of 5,466.6 thousand tonnes of municipal waste was directed to disposal processes (40.0% of total amount of municipal waste generated), of which 5,295.8 thousand tonnes (38.7% of total waste generated) for landfilling, and 170.8 thousand tonnes (1.2% of total waste generated) for incineration without energy recovery. Compared to 2020, a decrease of 1.3 percentage point in the proportion of municipal waste destined for disposal by landfilling was noted. In 2020, municipal waste disposed by landfilling accounted for 39.8% of the total municipal waste generated.

Map 20. Landfill sites in 2021



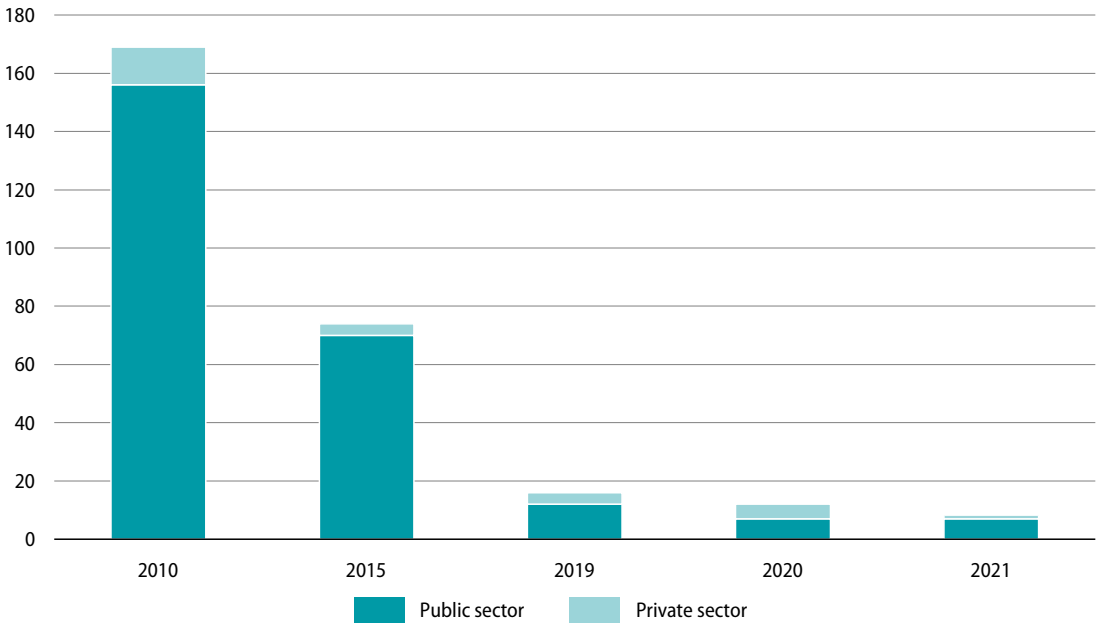
As of the end of 2021, there were 265 operational landfill sites receiving municipal waste. These landfill sites covered the area of 1,667.2 ha, of which 19.2% was reclaimed area. In 2021, eight landfill sites of this type were closed, with area of 31.0 ha, of which 65.2% was reclaimed during 2021.

Chart 14. Landfill sites in operation – as of 31 December



In connection with the necessity to adapt municipal waste landfill sites to the technical and organisational requirements resulting from legal provisions, the number of operational landfill sites has been systematically decreasing for several years.

Chart 15. Landfill sites closed[a]



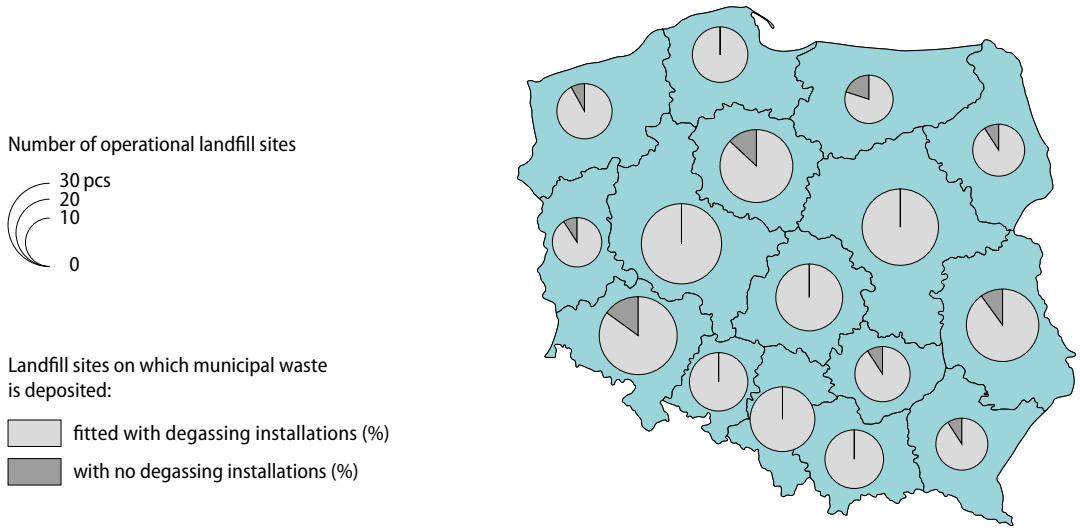
a During the year.

Degassing of landfill sites – collection of biogas from landfills receiving biodegradable waste. Collected gas is cleaned and used for production of energy, and if it is not possible (e.g. when its quantity is too small for effective energy production), it is neutralised through combustion in burners.

As of the end of 2021, in Poland, there were 249 landfill sites equipped with degassing installations, which accounted for 94.0% of the total number of operational landfill sites where municipal waste was deposited (the year before – 94.1%).

Out of total number of degassing installations, 35.2% were facilities releasing gas directly to the atmosphere (a decrease of 1.6 percentage point, compared to 2020). Installations where landfill gas was neutralised with heating energy recovery accounted for 7.4% of the total number of degassing installations (an increase of 0.1 percentage point), while 19.7% were installations, with the use of which landfill gas was used to generate electric energy (a decrease of 0.5 percentage point).

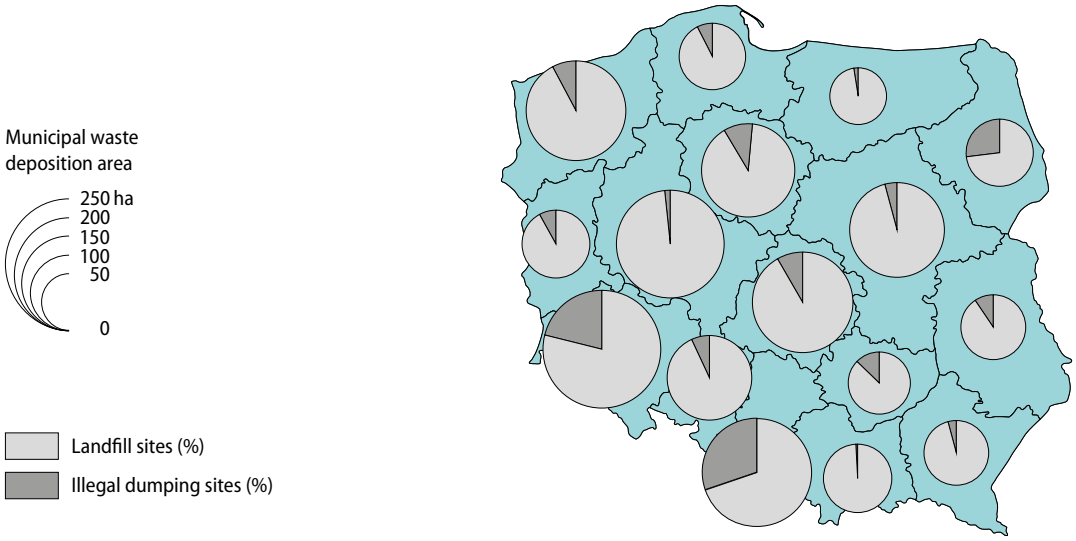
Map 21. Degassing of landfill sites – as of 31 December 2021



In 2021, neutralisation of captured landfill gas by burning facilitated recovery of 97,356.8 thousand MJ of heating energy (1.6% more than in 2020), and 109,921.5 thousand kWh of electric energy (2.8% less than in 2020).

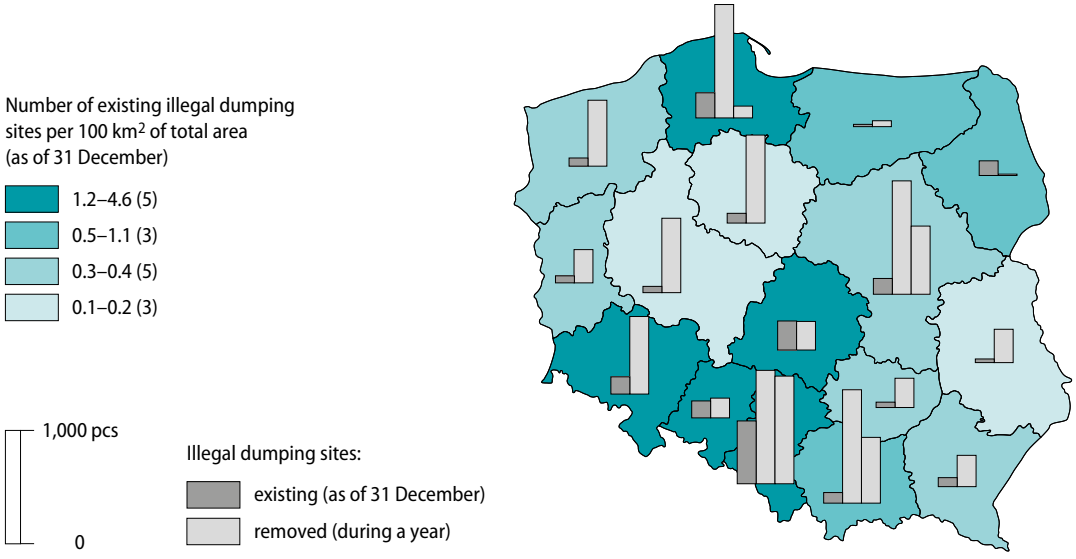
The area of operational landfill sites constituted 88.9% of the area on which municipal waste was deposited in Poland as of the end of 2021 (a decrease of 0.9 percentage point), while the remaining part was the area of illegal dumping sites, i.e. places not intended for municipal waste deposition.

Map 22. Municipal waste deposition area – as of 31 December 2021



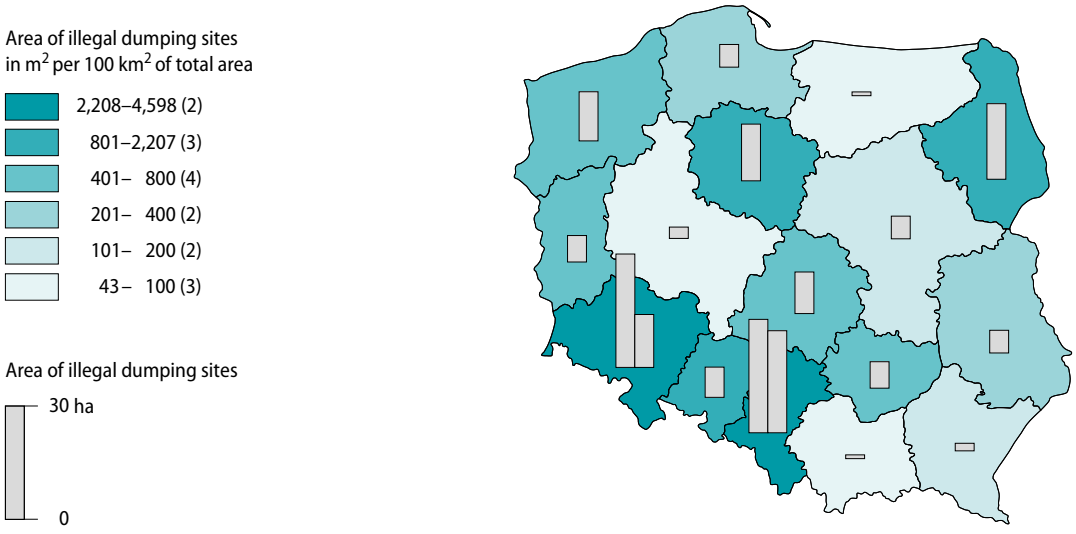
As of the end of 2021, there were 2,246 illegal dumping sites in Poland, i.e. by 11.9% more than as of the end of the previous year. There were 1,008 such places in urban areas (a rise of 12.4% in comparison with 2020), while in rural areas – 1,238 (an increase of 11.4% compared to 2020).

Map 23. Illegal dumping sites in 2021



In 2021, as many as 10.5 thousand illegal dumping sites were removed, 75.5% of which in urban areas. In comparison with the previous year, the total number of removed illegal municipal waste disposal sites increased by 5.7% (in urban areas it was a rise of 1.0%, whereas in rural areas – of 23.5%). During the removal of illegal dumping sites, 73.2 thousand tonnes of municipal waste was collected (by 1.5% more than in 2020), of which 71.7% in urban areas (by 14.3% less than in 2020), and 28.3% in rural areas (almost two times more than in 2020).

Map 24. Area of illegal dumping sites – as of 31 December 2021



Methodological notes

1. Sources and scope of data

The source of information on housing economy and municipal infrastructure in 2021 are results of surveys included in the Statistical survery programme of official statistics:

1.26.01 – Dwelling stocks management;

1.26.06 – Technical infrastructure of water supply and sewage systems, heating system, gas from gas supply system and electric energy and secondary use of data from surveys:

1.01.08 – Waste;

1.44.01 – Balances of fuels and energy;

1.44.02 – Electricity and heating sector.

Forms used for obtaining the data are as follows:

- M-06 Report on water supply network and sewage network;
- M-09 Report on collection and treatment of municipal waste;
- SG-01 part 3 Statistics of municipality: housing and municipal economy;
- Annex to the SG-01 report – Statistics of municipality: housing and municipal economy;
- G-02g Report on infrastructure, consumers and sales of gas from gas supply network;
- G-02b Balance report on energy carriers and heating infrastructure.

The survey in the field of housing conditions is conducted is conducted as a full survey and allows the assessment of changes in the field of housing economy. Data for the survey originate from Municipal Offices and District Offices of the Capital City of Warsaw.

The survey in the scope of water supply and sewage systems is conducted as a full survey and covers entities which primary, secondary, and ancillary activities is management of water supply and sewage systems.

Data regarding users of water supply and sewage systems concern population living in residential buildings, and in collective accommodation establishments, connected to a specific network.

Data on gas consumers concern the population in dwellings equipped with gas network installations.

Data concerning population using water supply and sewage systems, since 2014, due to a change in estimation methods, are not fully comparable with the respective data presented also in the publication "Municipal Infrastructure".

Data on energy management cover entities granted concessions for transmission and distribution of fuels and energy. Information on number of consumers and consumption of electricity concern households and collective accommodation establishments with complex agreements or distribution service contracts.

Data on consumption of electricity were stated on the basis of advance payments made by consumers.

Data on number of consumers of gas fuels come from entities which have concessions for gas trade and are based on the number of contracts with consumers of gas from gas supply network.

Information concerning heating energy include residential buildings and buildings of offices and institutions with central heating provided by heating transmission network, considered as a system of interconnected installations cooperating with each other, used for transmission and distribution of heating medium to recipients. Information on boiler houses include types of boilers, their power (i.e. maximum quantity of heat energy, which can be produced by boilers in a given time unit), annual production, and installed equipment supporting air protection (limiting emissions of air pollutants).

Since 2014, data on heating referring to sales of heating energy, number of boiler houses, characteristics of boilers, and equipment installed in boiler houses protecting the atmosphere against emissions of pollutions take into the account the revised subjective scope of the survey.

The survey providing information on municipal waste is conducted as a full survey and includes entities operating in the field of collection or treatment of municipal waste. Results include: amount of waste collected (of which from households) and intended for recovery and disposal processes.

Due to the fact that since 1.07.2013, all real estate owners are covered by municipalities with municipal waste management system, the amount of waste collected is deemed to be waste generated.

The conducted reform of the municipal waste management system changed the organization of collection of municipal waste from real estate owners. At present, municipalities are obligated to organize tenders for collection of municipal waste from real estate owners or tenders for collection and management of that waste. Real estate owners do not enter into contracts with entities providing municipal waste collection services from inhabitants by themselves.

For computing data per 1 inhabitant (1,000 of population, etc.) as of the end of the year (e.g. number of population using municipal equipment), data on population as of 31 December were used, while for data describing the magnitude of a phenomenon during the year (e.g. consumption) – as of 30 June.

Data on consumption of water, electric energy and gas as well as the amount of municipal waste generated, and collected per inhabitant for the years 2010–2019 were compiled on the basis of results of the National Population and Housing Census 2011, since 2020 on the basis of results of the National Population and Housing Census 2021. Data on population using municipal equipment were compiled on the basis of results of the National Population and Housing Census 2011. For the years 2020–2021 these data will be revised on the basis of final data from Census 2021, in October 2023.

2. Main definitions

Dwelling stocks – both inhabited and uninhabited dwellings located in residential and non-residential buildings. Collective accommodation facilities (i.e. workers' hostels, dormitories, boarding houses, or social welfare houses), except for dwellings located therein, provisional facilities and movable objects (i.e. portable huts, railway cars, barges and ships), are not included in the dwelling stock.

Dwelling – a premise consisting of one or more rooms including auxiliary rooms, built or rebuilt for living in it, separated constructionally (with fixed walls) within a building, with independent entrance from the staircase, common hall, entrance hall or directly from the street, courtyard or garden. Under auxiliary rooms one shall understand: a hallway, a hall, a bathroom, a toilet, a dressing room, a pantry, a storeroom and other rooms located within the premises of a dwelling, serving the occupants to meet their housing and economic needs.

Uninhabited dwelling – a dwelling in which nobody stays temporarily or lives permanently.

Premise – a room or set of rooms separated with the durable walls within the building dedicated to the permanent stay of people, which together with the auxiliary rooms serve the purpose of meeting their housing needs or which are used according to their dedication for the purposes other than residential purposes.

Useful floor area of dwellings – the useful floor area of a dwelling should be understood as the total area of all rooms within the dwelling, especially the area of living room, kitchen (with or without a window), pantry, entrance hall, alcove, bathroom, toilets, encased veranda or porch, dressing room and other rooms, meeting the housing and economic needs of the residents, regardless of their purpose and way of usage.

The area of the hallway is usually calculated as a floor area of a dwelling. The area of the hallway is not calculated as useful floor area unless it connects the residential part of the building to its storage or economic part, or there is more than one dwelling in the building and the hallway is used by all residents as a common accessible hall.

The area of balconies, terraces, recessed balconies, mezzanines, wardrobes, cabinets, cubby holes, laundries, drying rooms, rooms for storing prams, attics, cellars and coal-holes, as well as the area of garages, water pump rooms and boiler rooms is not recognized as useful floor area of a dwelling.

Room – a space in a dwelling, separated from other rooms with fixed walls from the floor to the ceiling with direct sun lighting, with area not smaller than 4 m^2. Both living room and the kitchen are regarded a room if they meet the above mentioned criteria.

The entrance hall, the hall, the bathroom, the toilet, the pantry, the encased veranda or porch, the dressing room, the alcove, the storeroom, etc. are not regarded a room, regardless of their area and lighting.

The social premises rental contract is a contract for the rent of habitable premises with regard to equipment and technical conditions, which room area per household member shall not be less than 5 m^2, and in the case of a single person household – 10 m^2, however they can be substandard premises. The social premises rental contract is concluded for a fixed period and may me concluded with a person who has not legal tittle to the premises and whose household income do not exceed the amount specified in the resolution of the gmina council adopted on the basis of the Act of 21 June 2001 on Protection of Rights of Occupants, Municipal Dwelling Stock, and Amendment of the Civil Code. The rent price in the case of the rental of social premises cannot exceed half of the lowest rent price applicable in the gmina's dwelling stocks. These are premises meeting the statutory requirements that the gmina allocated for rent or sublease within a social rental.

Temporary premises are habitable premises, with access to a water supply system and to a lavatory, even if the equipment is located outside the building, natural and electric lighting, a heating system, not damp building partitions, and the possibility of installing cooking appliances, as well as providing at least 5 m^2 of room surface per person and, if possible, located in the same or a nearby area where the rehoused persons have lived so far.

Demand for the rental of gminas' dwelling stocks – housing premises necessary to be acquired by the gmina due to their shortage resulting from: the number of households awaiting the rental of premises from a gmina's dwelling stocks, residential premises and temporary premises rented from other entities intended for residence, as well as the number of premises that do not meet technical standards for living.

Housing allowance is a common and periodical financial benefit resulting from regulations of the Act of 21 June 2001 on Residential Benefits, intended to provide financial support for expenses related to occupation of residential premises or one family houses.

Characteristics: it is an obligatory provision granted upon the request of entitled person meaning that people meeting statutory conditions have the right to demand its payment and it is common (it will be granted regardless of the legal title to the premises that appertains the entitled person apart from exceptions stipulated by law), as well as periodical – because it is granted for a defined period with a possibility to be granted again in the case of further meeting the statutory conditions.

The criteria entitling to be granted housing allowance are:

- legal title to the premises – allowance may be granted to residential premises tenants and subtenants living in residential dwellings to which they have cooperative right to residential premises, in residential dwellings in buildings constituting their ownership and to the owners of housing premises and other persons having a legal title to occupy residential premises (e.g. contract for use) and bearing expenses for their maintenance, as well as persons inhabiting housing premises without a legal title, waiting for alternative or social premises;
- the amount of family income;
- dwelling's size – dwelling's useful floor area. The Act uses the expression of "a normative surface" – the allowance is granted for a strictly defined number of the dwelling's meters.

When calculating the amount of allowance expenses (borne by a household) related to rent are taken into account, as well as the exploitation costs of thermal power, water and commissioning of liquid waste.

Housing allowance constitutes a difference between housing expenses on normative useful floor area of the inhabited dwelling and the part of expenses borne by a person granted the allowance.

From 2004 payment of housing allowances is – according to Article 10 (1) of the Act of 21 June 2001 on Residential Benefits – own task of a gmina.

Pursuant to the Act of 13 November 2003 on Income of Local Government Units, housing allowance level must not exceed 70% of actual expenses incurred for the housing premises. The commune council, by means of a resolution, may increase or reduce, no more than by 20 percentage points, the level of percentage rates. This means that the maximum height of paid allowance may amount from 50% to 90% residential expenses.

The information presented in the publication applies only to housing allowances physically paid in reporting year, regardless of the date of the granted performance allowance decision.

Households awaiting rental of premises from a gmina – households meeting the requirements of the gmina council resolution determining the rules for rental of premises being a part of gmina's dwelling stocks.

Improved land – building plots intended for housing construction purposes with possibility of connection to water supply system, sewage system, electrical power system, and heating system.

Common land – land owned by municipalities and inter-municipal associations, land with unknown owners in actual possession of municipal organisational units without legal personality, and land owned by municipalities and inter-municipal associations under the perpetual usufruct.

Municipal infrastructure – basic installations and service institutions, which are essential to functioning of the economy and population.

Water supply system – a set of water network devices serving collection of surface and underground waters, public wells, devices serving storage and treatment of water, water supply networks, and water pressure control devices.

Water supply transmission network – conduits bringing water from distant water intakes to distribution network.

Water supply distribution network – street conduits used for distribution of water to consumers by the connections to buildings and other objects.

Water supply connection – a segment of a conduit connecting water supply network with internal water supply installation on a property of consumer together with a valve past the main water-meter.

Water delivered to households – the quantity of water collected from water supply network using facilities installed in a building.

Sewage system – a complete sewage collection system serving discharging of wastewater, including sewage network, outlets of devices used to emit sludge into the waters, or into the ground, sewage pretreatment and treatment facilities, and sewage pumping stations.

Active sewage network – a system of covered (underground) conduits discharging sewage from buildings and other objects to collectors or sewage treatment facilities.

Sewage connection – a segment of conduit connecting internal sewage installations on a property of consumer with the sewage network, past a first inspection chamber from a building, and in the case of its lack – from a boundary of the property.

The density of water supply network per 100 km^2 – the indicator is a quotient obtained by dividing of the length of water supply network by the area of surveyed surface, multiplied by 100.

The density of sewage network per 100 km^2 – the indicator is a quotient obtained by dividing of the length of sewage network by the area of surveyed surface, multiplied by 100.

Wastewater discharged – domestic wastewater or the mixture of domestic wastewater with industrial wastewater or rainfall or thaw – discharged to sewage system.

Domestic wastewater – sewage from residential buildings, collective accommodation establishments, and public buildings, which originates from the human metabolism or activities of households as well as sewage of similar composition originating from such buildings.

Septic tank – an installation and device intended for an accumulation of liquid waste where it is generated.

Household wastewater treatment system – a complex of devices intended for treatment of sewage produced in one or more households.

Liquid waste – sewage stored temporarily in septic tanks or settlements chambers of household wastewater treatment systems.

Dump station – an installation and device, placed near a sewer or a wastewater treatment plant, intended for a collecting of liquid waste transported by sewage disposal vehicles from where it is accumulated.

Gas supply network – a system of conduits providing gas supplied by enterprises, which scope of economic activity includes transmission and distribution of gas to consumers. The system of conduits consists of:

- transmission and distribution network (with high-methane gas and nitrogenised gas) – street conduits used for distribution of gas to buildings or other objects by means of connections;
- connections – a system of conduits joining distribution gas supply network with buildings and other objects.

Heating transmission network – a system of conduits transmitting heating medium to distribution conduits.

Heating distribution network – a system of distribution conduits transmitting heating medium to connections to buildings.

Connections to buildings – sections of heating network supplying heat only to one central heating substation or a section of external installation past central heating substation or heat source, joining these installations with receiving installations in buildings.

Boiler house – a building or a room with boilers and devices used for production of thermal energy for heating or both heating and supplying hot water.

Heat only boilers – devices used exclusively for production of heat (steam heat or hot water heat).

Heat generation – total amount of heat generated in devices (e.g. boilers, heat exchangers).

Municipal waste – waste generated in households, excluding discarded vehicles, as well as waste generated by other producers of waste which because of its character or composition is similar to waste from households.

Biowaste – waste capable of undergoing anaerobic or aerobic decomposition.

Collecting of waste – gathering of waste for the purpose of transport to a waste treatment facility, including the preliminary sorting (not leading to essential change of character and composition of waste and not leading to change of classification of waste) and preliminary storage of waste by a waste collector.

Separate collection – the collection where a waste stream is kept separately by type and nature so as to facilitate a specific treatment.

Municipal waste separate collection facility – a stationary place where various types of municipal waste, e.g. paper and cardboard, glass, composite packaging, plastics, or biowaste can be handed over.

Waste management – the collection, transport, recovery and disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including actions taken as a dealer or broker.

Treatment – recovery or disposal operations, including preparation prior to recovery or disposal.

Recovery of waste – any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy.

Thermal treatment of waste – incineration of waste by oxidation and other processes of thermal treatment of waste including pyrolysis, gasification, and plasma process provided that substances originating from these processes of thermal treatment of waste are incinerated afterwards.

Energy recovery – thermal waste treatment as a result of which energy is generated.

Recycling – any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

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

Landfill site – a structure for the deposit of waste.

Degassing of landfill sites – collection of biogas from landfill sites receiving biodegradable waste. Collected gas is cleaned and used for production of energy, and if it is not possible (e.g. when its quantity is too small for effective energy production), it is neutralized through combustion in burners.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