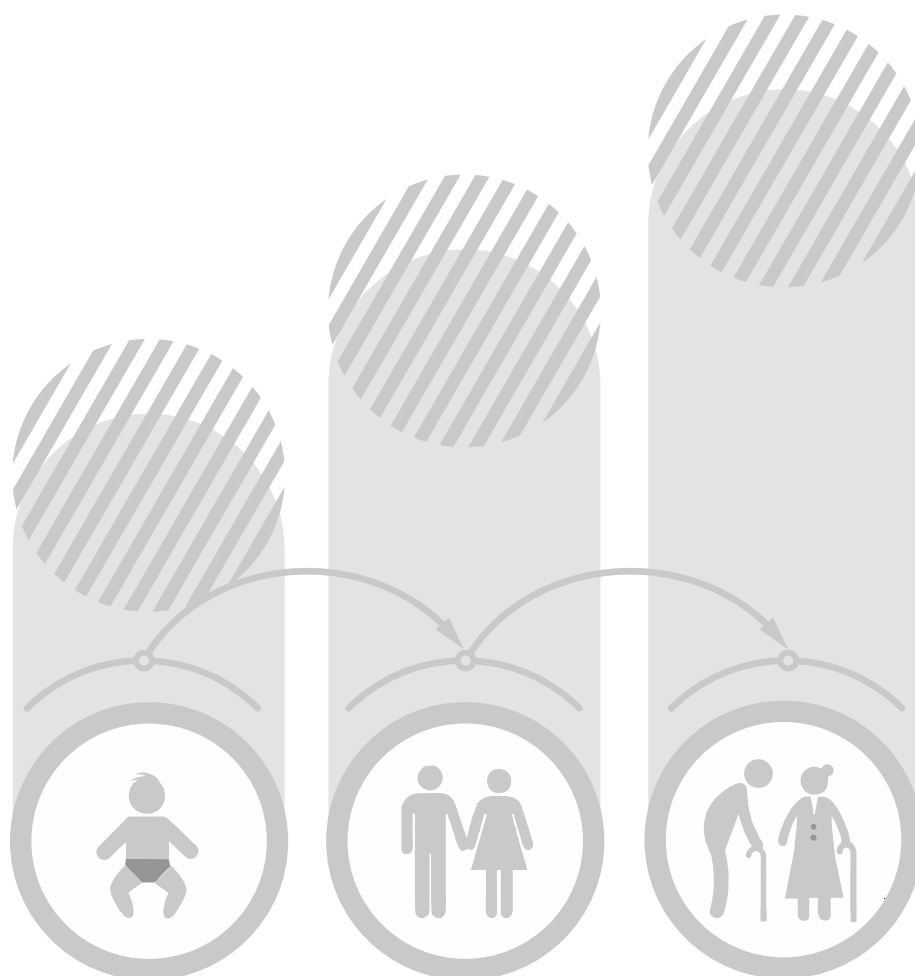


Life expectancy in Poland 2023



Life expectancy in Poland 2023

Główny Urząd Statystyczny Statistics Poland

Warsaw 2024

Content-related works

Statistics Poland, Demographic Survey Department

Supervised by

Anna Wysocka

Editorial team

Maciej Potyra, Katarzyna Góral-Radziszewska, Kamil Waškiewicz, Emilia Gawińska-Druźba

Typesetting and graphics

Andrzej Paluchowski, Aleksandra Paprocka

ISSN 1507-1340

Publication available on website

stat.gov.pl/en/

When publishing Statistics Poland data — please indicate the source

Preface

This publication is a regular elaboration of the Statistics Poland concerning life tables. Since the 1950s the publications were released every five years and contained complete life tables. Also, each year since the early 1970s the abridged life tables were calculated, using an alternative method. Beginning from 1995 only complete life tables have been prepared. Life tables in the years 2012-2021 were compiled using balances of number and structure of the population derived on the basis of the results of the population and housing census of 2011. From 2022, the basis for calculating life expectancy is the result of the National Population and Housing Census 2021.

This publication consists of three parts – the analytical one, which presents the current parameters of life expectancy and discusses the changes that took place in the years 1960-2023, methodological notes and basic tables, which present the results of the study, also divided by voivodships and subregions.

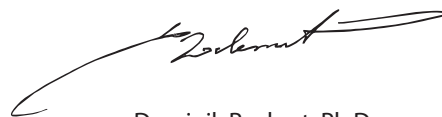
Presenting this publication we shall appreciate any comments and suggestions which will be a valuable advice in the development of this research area and will also contribute to the improvement of content and the look of next editions of this publication.

Director
of Demographic Surveys Department



Anna Wysocka

President
of Statistics Poland



Dominik Rozkrut, Ph.D.

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Chapter 1. Introduction - synthesis

The average life expectancy is known as the measure used to determine the amount of retirement pensions. Meanwhile, the use of this indicator in social sciences is much broader. Annual analysis of life expectancy allows to observe changes in the general health of the population. In addition, average life expectancy also illustrates the living conditions in a given area. For example, in less developed countries, life expectancy is significantly lower than in more developed ones.

In recent decades the development of various measures based on average life expectancy has been observed. For example, with their help, attempts are made to estimate life expectancy without illness or disability (Góral-Radziszewska et al., 2020), as well as analyses of the population ageing process.

In 2023, the average life expectancy for men in Poland was 74.7 years and 82.0 years for women. In comparison to the 2022, life expectancy increased by 1.3 and 0.9 years respectively. Taking into account 1990, life expectancy increased by 8.5 and 6.8 years.

The average life expectancy of a person aged x years is denoted in literature by e_x and expresses the average number of years a person aged x has left to live – given current mortality conditions of the population. Particularly noteworthy is the parameter e_0 called the average life expectancy at birth (or shorter – the average life expectancy). These measures are calculated using data from registers which consist of:

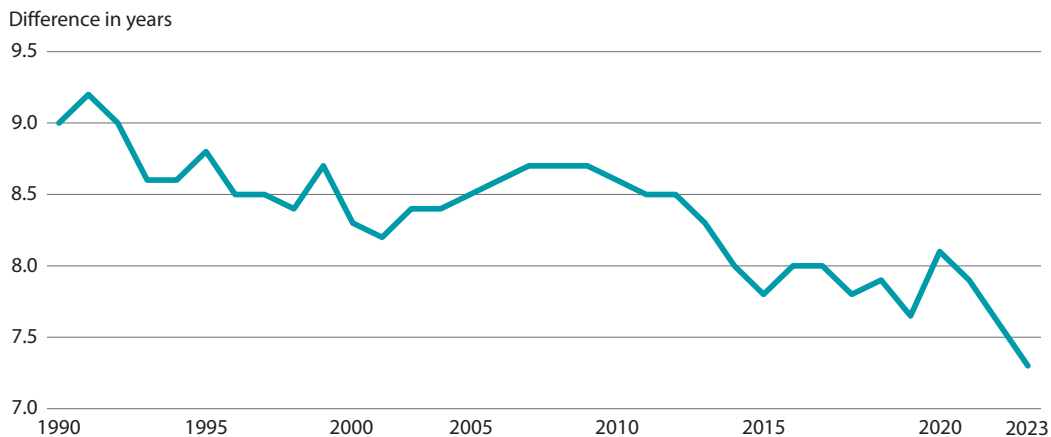
- deaths in a given calendar year by age,
- population by sex and age as of June 30 of a given year.

This publication presents data on life expectancy and mortality of the Polish population until 2023. The indicators contained in the study, for 2023, can be interpreted as calculated for a hypothetical cohort, assuming that the risk of death at a particular age would be the same as in the examined period.

Chapter 2. Life expectancy in Poland

In Poland, as in other countries, mortality among men is higher compared to women. However, the scale of this phenomenon is much higher than in most European countries. Although in the 90s the decline of the difference between the average life expectancy of men and women was observed (in 1991 – 9.2 years; in 2001 – 8.2 years), in the first decade of the 21st century it rose again to the value of 8.7 (in 2006-2008). By 2014, it fell too slightly below 8.0 and till 2020 remained at roughly similar level. In the last three years a significant decrease has been observed. In 2023 it amounted to 7.3 years (Chart 1).

Chart 1. Difference (in years) in life expectancy between males and females 1990-2023



Higher mortality among men compared to women is observed in almost all age groups. If mortality conditions remained at the level observed in 2023, the age of 18 would not be reached by 0.7% of men (in 1990 – 3.0%) and 0.6% of women (in 1990 – 2.2%). The difference between men and women increases with age – 4.8% of men and 1.9% of women would not reach the age of full professional activity i.e. 45 years (compared to 10.7% and 4.7% in 1990), while 75 years would not be reached by 43.6% of men and 22.6% of women (63.9% and 37.5% in 1990).

In 2023, the life expectancy of 15-year-olds was 60.1 years for boys and 67.4 for girls (in 1990 it was 7.0 years less for boys and 5.6 years for girls). Life expectancy of the 45-year-olds was 31.9 years for men and 38.1 for women, which in comparison to 1990 means an increase in the life expectancy by 5.8 and 5.1 respectively.

Table 1. Life expectancy by age in Poland 1960-2023

Years	Males						Females					
	by age											
	0	15	30	45	60	75	0	15	30	45	60	75
1960	64.9	55.0	41.1	27.7	15.9	7.5	70.6	59.9	45.5	31.6	18.7	8.6
1961	64.9	54.8	41.0	27.6	15.8	7.7	70.8	60.0	45.6	31.6	18.7	8.7
1962	64.5	54.4	40.6	27.3	15.4	7.3	70.5	59.7	45.3	31.3	18.4	8.4
1963	65.4	55.0	41.2	27.8	15.9	7.5	71.5	60.3	45.8	31.9	18.9	8.8
1964	65.8	55.1	41.2	27.7	15.7	7.4	71.6	60.3	45.8	31.7	18.7	8.6
1965	66.6	55.5	41.5	28.1	16.1	7.7	72.4	60.6	46.1	32.1	19.0	8.8
1966	66.9	55.6	41.6	28.2	16.2	7.8	72.9	60.9	46.4	32.3	19.3	8.9
1967	66.4	55.1	41.1	27.7	15.8	7.4	72.6	60.6	46.0	31.9	18.9	8.5
1968	67.0	55.3	41.4	27.9	16.1	7.9	73.6	61.3	46.7	32.6	19.6	9.4
1969	66.5	54.8	40.8	27.4	15.6	7.6	73.1	60.8	46.3	32.1	19.2	8.9
1970	66.6	54.8	40.9	27.5	15.7	7.6	73.3	61.0	46.5	32.3	19.2	8.9
1971	66.1	54.0	40.1	26.8	15.0	6.8	73.3	60.6	46.1	31.9	18.9	8.5
1972	67.3	55.1	41.2	27.8	16.0	7.6	74.2	61.5	46.9	32.7	19.6	9.0
1973	67.2	54.8	40.8	27.5	15.8	7.3	74.3	61.4	46.8	32.6	19.5	8.9
1974	67.8	55.2	41.1	27.7	16.0	7.5	74.6	61.6	47.0	32.8	19.7	9.0
1975	67.0	54.5	40.6	27.3	15.7	7.2	74.3	61.3	46.7	32.5	19.4	8.7
1976	66.9	54.3	40.3	27.1	15.7	7.3	74.6	61.5	46.9	32.7	19.6	9.0
1977	66.5	53.9	40.1	26.9	15.6	7.2	74.5	61.5	46.9	32.7	19.7	9.0
1978	66.4	53.7	39.8	26.7	15.5	7.1	74.5	61.4	46.8	32.6	19.6	8.8
1979	66.8	54.0	40.1	26.9	15.7	7.3	74.9	61.6	47.1	32.8	19.8	9.1
1980	66.0	53.1	39.2	26.2	15.2	6.9	74.4	61.2	46.5	32.4	19.4	8.8
1981	67.1	54.2	40.3	27.0	15.8	7.5	75.2	61.9	47.3	33.1	20.1	9.4
1982	67.2	54.3	40.3	27.1	15.8	7.5	75.2	61.9	47.3	33.1	20.1	9.4
1983	67.0	54.0	40.0	26.8	15.7	7.4	75.2	61.8	47.2	32.9	19.9	9.3
1984	66.8	53.7	39.7	26.5	15.5	7.3	75.0	61.5	46.9	32.7	19.7	9.1
1985	66.5	53.3	39.2	26.0	15.1	7.0	74.8	61.3	46.7	32.5	19.5	9.0
1986	66.8	53.4	39.4	26.1	15.3	7.3	75.1	61.5	46.9	32.7	19.7	9.2
1987	66.8	53.5	39.4	26.1	15.3	7.3	75.2	61.6	46.9	32.7	19.8	9.3
1988	67.2	53.7	39.6	26.4	15.5	7.5	75.7	61.9	47.2	33.0	20.1	9.5
1989	66.8	53.3	39.3	26.2	15.4	7.6	75.5	61.8	47.1	32.9	19.9	9.5
1990	66.2	53.1	39.1	26.1	15.3	7.5	75.2	61.8	47.2	33.0	20.0	9.5
1991	65.9	52.6	38.6	25.7	15.1	7.4	75.1	61.6	46.9	32.7	19.8	9.3
1992	66.5	53.1	39.1	26.1	15.4	7.7	75.5	61.9	47.3	33.1	20.1	9.5
1993	67.2	53.7	39.6	26.4	15.5	7.7	75.8	62.2	47.5	33.2	20.1	9.4
1994	67.5	53.9	39.9	26.7	15.8	7.8	76.1	62.4	47.7	33.5	20.4	9.6
1995	67.6	53.9	39.8	26.7	15.8	7.9	76.4	62.6	47.9	33.6	20.5	9.7
1996	68.1	54.3	40.2	26.9	15.9	7.9	76.6	62.7	48.0	33.7	20.5	9.7
1997	68.5	54.5	40.4	27.1	16.1	8.2	77.0	62.9	48.2	33.9	20.8	9.9
1998	68.9	54.8	40.7	27.4	16.4	8.4	77.3	63.2	48.5	34.2	21.0	10.0
1999	68.8	54.8	40.6	27.3	16.3	8.3	77.5	63.3	48.6	34.3	21.1	10.1

Table 1. Life expectancy by age in Poland 1960-23 (cont.)

Years	Males						Females					
	by age											
	0	15	30	45	60	75	0	15	30	45	60	75
2000	69.7	55.6	41.4	27.9	16.7	8.6	78.0	63.8	49.0	34.7	21.5	10.4
2001	70.2	56.0	41.8	28.3	17.0	8.8	78.4	64.1	49.4	35.0	21.8	10.6
2002	70.4	56.2	42.0	28.5	17.2	8.8	78.8	64.5	49.8	35.4	22.2	10.8
2003	70.5	56.3	42.0	28.5	17.1	8.7	78.9	64.6	49.8	35.4	22.2	10.8
2004	70.7	56.4	42.1	28.6	17.4	8.9	79.2	64.9	50.1	35.7	22.5	11.0
2005	70.8	56.5	42.2	28.7	17.5	9.0	79.4	65.0	50.3	35.8	22.7	11.2
2006	70.9	56.6	42.3	28.8	17.7	9.1	79.6	65.2	50.5	36.0	22.8	11.3
2007	71.0	56.6	42.4	28.8	17.7	9.1	79.7	65.3	50.6	36.1	22.9	11.4
2008	71.3	56.9	42.6	29.1	17.9	9.2	80.0	65.5	50.8	36.3	23.1	11.5
2009	71.5	57.1	42.9	29.3	17.9	9.2	80.1	65.6	50.9	36.4	23.2	11.6
2010	72.1	57.6	43.3	29.7	18.3	9.5	80.6	66.1	51.3	36.8	23.5	11.9
2011	72.4	58.0	43.7	30.0	18.5	9.7	80.9	66.4	51.6	37.1	23.8	12.1
2012	72.7	58.2	43.9	30.2	18.6	9.7	81.0	66.5	51.7	37.1	23.8	12.2
2013	73.1	58.6	44.3	30.5	18.7	9.8	81.1	66.6	51.8	37.3	23.9	12.3
2014	73.8	59.2	44.9	31.0	19.2	10.1	81.6	67.1	52.3	37.7	24.3	12.6
2015	73.6	59.0	44.7	30.8	19.0	10.0	81.6	67.0	52.2	37.6	24.1	12.5
2016	73.9	59.4	45.0	31.2	19.3	10.3	81.9	67.3	52.5	38.0	24.5	12.8
2017	74.0	59.4	45.0	31.2	19.2	10.2	81.8	67.2	52.4	37.9	24.3	12.8
2018	73.8	59.3	44.9	31.1	19.1	10.2	81.7	67.1	52.3	37.7	24.2	12.7
2019	74.1	59.5	45.1	31.3	19.3	10.2	81.8	67.2	52.4	37.8	24.2	12.6
2020	72.6	58.0	43.6	29.9	17.9	9.2	80.7	66.1	51.3	36.8	23.2	11.9
2021	71.8	57.2	42.8	29.1	17.3	8.8	79.7	65.1	50.3	35.8	22.4	11.3
2022	73.4	58.9	44.5	30.7	18.7	9.7	81.1	66.5	51.7	37.2	23.6	12.0
2022	74.7	60.1	45.7	31.9	19.6	10.3	82.0	67.4	52.6	38.1	24.4	12.6

In 2023 the value of e_0 for a male newborn was 74.7 years (Table 1). This means that if during the life of a man born in 2023 the conditions of population mortality did not change at all, he would, on average, live to that age. In order to correctly interpret the life table, it should be remembered that each value depends on two conditions – maintenance of the mortality pattern at the level for a given year and survival till the indicated age.

And so – according to the life table for 2023 – the average life expectancy for a man at the age of 30 is 45.7 years, i.e. on average he would live to 75.7 years – thus one year more than a boy born in 2023. The chances of reaching the subsequent birthday increase with age. For a man aged 60, the average life expectancy is 19.6 years, so on average he would live to 79.6 years.

In 2023, the life expectancy for males living in urban areas was 75.0 years, which is a 0.8 year longer than for males in rural areas. For females in urban areas average life expectancy was on average 81.9 years and was 0.1 year shorter than in rural areas. Nowadays females in urban areas live 7.0 years longer than males (in 1991 it was almost 9; in 2001 – 7.8) while in rural areas the difference is 7.9 years (in 1991 – 9.7; in 2001 – 8.8).

The mortality in Poland was very high directly after the Second World War. In 1950 the life expectancy for male was slightly above 56 years, while for female it was almost 62 years. In the 1950s Poland experienced

a sharp drop in mortality rates and consequently a significant growth of life expectancy. This positive tendency continued also in the next decade although the progress was much slower. Over a period of next 20 years (during the 1970s and 1980s) the life expectancy for men hardly changed – even some drops were recorded periodically – while life expectancy for women increased by only 2 years.

The 1990s brought a change of this negative tendency. Between 1991 and 2019 life expectancy increased by 8.2 years for males and by 6.7 years for females (Chart 2). Such a significant growth was achieved thanks to the crucial progress in lowering the mortality both for men and women and particularly by strengthening the tendency of decreasing infant mortality. In 2019, males in Poland lived on average 18 years longer than in the middle of the last century, while women lived 20 years longer.

The increase of life expectancy for older males observed in the 1950s became inhibited in the 1960s. The renewed growth was observed from the middle of the 1980s. Thus in the years 1960-2019 life expectancy for a 60-year-old man rose by 3.4 years (to 19.3 years). Among women of the same age a constant improvement of life expectancy was observed (Chart 3). Life expectancy of a 60-year-old woman grew from 1960 till 2019 by 5.5 years (to 24.2 years).

As a result of the COVID-19 pandemic and the associated increased number of deaths, life expectancy in 2020 and 2021 was significantly shortened compared to 2019 – by 2.3 years for men and 2.1 years for women. This unfavorable trend was reversed in 2022 and life expectancy increased again (compared to 2021 by 1.7 years for men and 1.4 for women), but for both sexes it was still 0.7 years lower than in 2019. In 2023, another increase in life expectancy was recorded (to 74.7 years for men and 82 years for women). Its value was therefore higher than before the COVID-19 pandemic, as well as the highest recorded in the history of Poland.

Chart 2. Life expectancy at birth in Poland 1960-2023

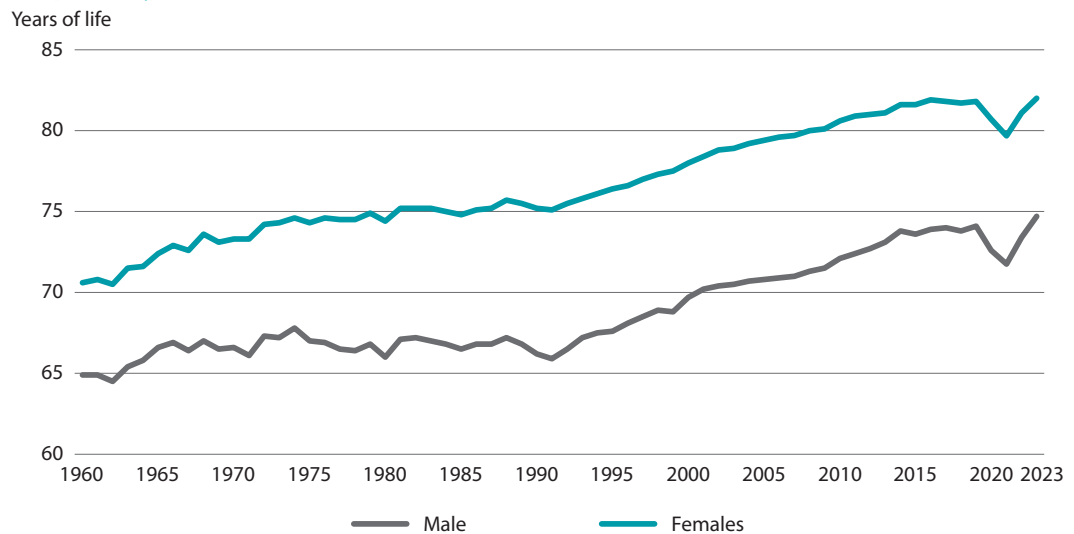
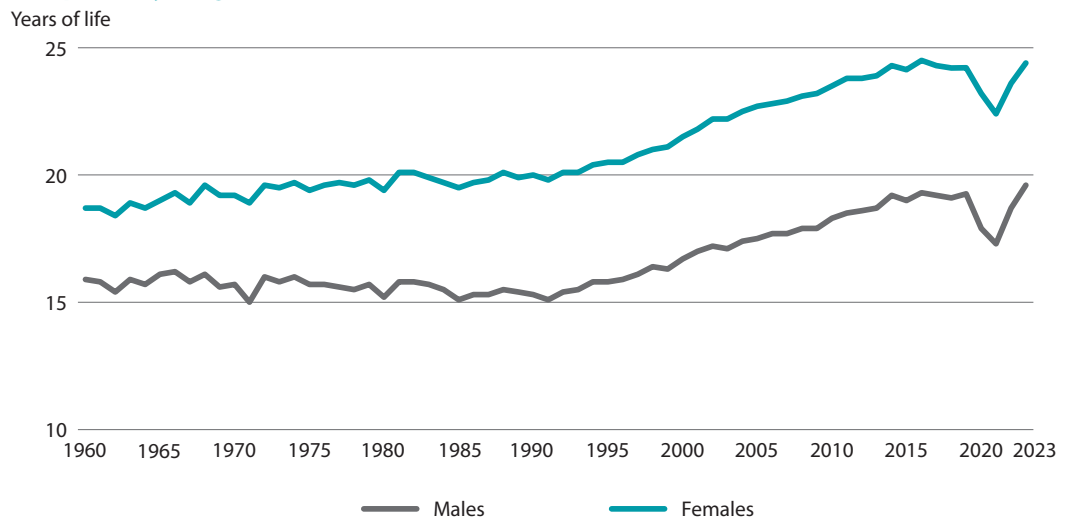


Chart 3. Life expectancy at age 60 in Poland 1960-2023



Chapter 3. Spatial diversity of life expectancy

3.1. Macroregions

In 2023, the longest life expectancy for men was observed in Eastern and Southern macroregions (75.1 years) (Table 2) and for women in Eastern Macroregion (83.2 years). The shortest for men was recorded in the Central Macroregion (73.4 years) and in Central and North-Western in case of women (81.6 years) .

In urban areas men live on average longer than in rural areas. In the Eastern macroregion this difference is the biggest – 1.8 years. Only in the Southern macroregion, the life expectancy for men in urban areas is shorter than in rural (by 0.6 years). In the case of women in two macro-regions, life expectancy is higher among women living in rural areas, and in five – in urban areas.

Table 2. Life expectancy in Poland by macroregions in 2023

	Males					Females				
	by age									
	0	15	30	45	60	0	15	30	45	60
Total	74,7	60,1	45,7	31,9	19,6	82,0	67,4	52,6	38,1	24,4
Southern	75,1	60,5	46,0	32,1	19,7	81,9	67,3	52,5	38,0	24,3
North-western	74,5	59,9	45,5	31,7	19,3	81,6	67,0	52,2	37,7	24,1
South-western	74,6	60,0	45,6	31,7	19,4	81,9	67,3	52,5	38,0	24,3
Northern	74,5	60,0	45,7	31,8	19,5	81,7	67,1	52,4	37,8	24,2
Central	73,4	58,8	44,4	30,9	19,0	81,6	67,0	52,3	37,8	24,1
Eastern	75,1	60,6	46,1	32,4	20,1	83,2	68,6	53,8	39,2	25,3
Mazowieckie voivod.	74,8	60,3	45,9	32,1	19,9	82,2	67,5	52,8	38,2	24,5
Urban areas	75,0	60,4	46,0	32,1	19,8	81,9	67,3	52,6	38,1	24,4
Southern	74,8	60,2	45,8	31,9	19,6	81,6	67,0	52,2	37,7	24,1
North-western	74,7	60,1	45,7	31,9	19,6	81,7	67,1	52,4	37,9	24,3
South-western	74,6	60,1	45,6	31,8	19,6	82,0	67,4	52,6	38,1	24,4
Northern	75,0	60,5	46,1	32,2	19,9	81,9	67,4	52,6	38,1	24,5
Central	73,7	59,1	44,7	31,2	19,2	81,4	66,7	52,0	37,6	24,0
Eastern	75,9	61,4	46,9	33,1	20,7	83,2	68,7	54,0	39,4	25,5
Mazowieckie voivod.	75,6	61,0	46,6	32,8	20,3	82,2	67,6	52,8	38,3	24,6
Rural areas	74,2	59,6	45,2	31,5	19,2	82,1	67,5	52,7	38,1	24,3
Southern	75,5	60,8	46,3	32,3	19,8	82,6	68,0	53,2	38,6	24,6
North-western	74,0	59,4	45,1	31,3	18,9	81,3	66,7	51,9	37,3	23,6
South-western	74,3	59,8	45,4	31,5	19,1	81,7	67,1	52,3	37,8	24,0
Northern	73,7	59,2	44,9	31,2	18,9	81,2	66,7	51,9	37,3	23,6
Central	73,1	58,5	44,1	30,5	18,7	82,0	67,4	52,7	38,1	24,3
Eastern	74,4	59,9	45,4	31,7	19,5	83,1	68,5	53,7	39,0	25,1
Mazowieckie voivod.	73,5	59,0	44,6	31,0	19,0	82,1	67,4	52,7	38,1	24,3

3.2. Voivodships

Between 1990 and 2019 there was a significant progress in increasing the life expectancy in all voivodships. This particularly applies to males in Pomorskie, Zachodniopomorskie, Śląskie, Kujawsko-Pomorskie, Opolskie and Warmińsko-Mazurskie, for whom life expectancy between 1990 and 2019 has grown by more than 8 years (Table 3). In this period the smallest growth took place in Lubelskie and Świętokrzyskie (7.1 years). For females the highest growth of life expectancy parameters was observed in Opolskie and Pomorskie (7.1 years), the smallest in Warmińsko-Mazurskie and Lubelskie (6 years).

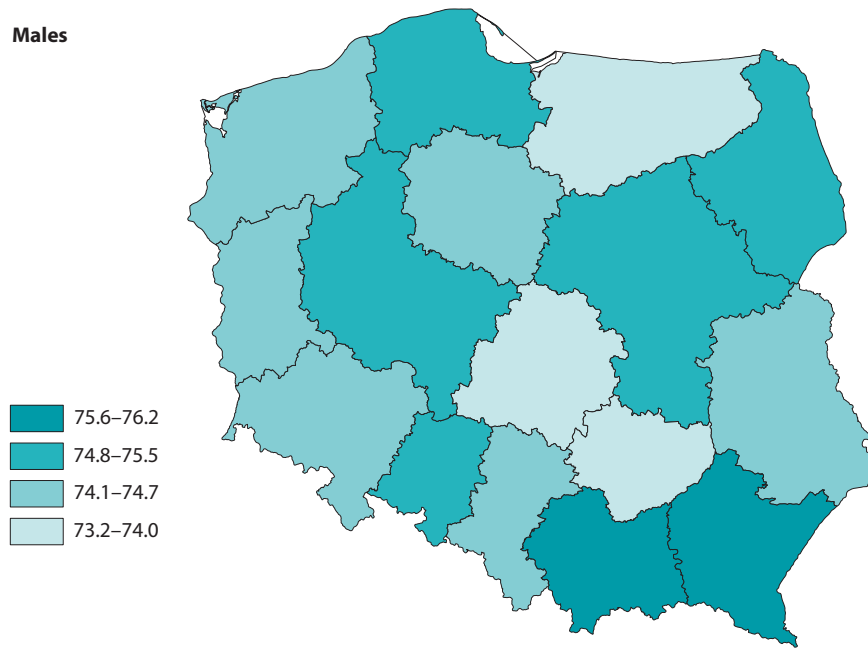
In 2020 and 2021, due to the COVID-19 pandemic, there was a sharp decline in life expectancy in all voivodships, for both men and women. In the case of men, the largest decrease compared to 2019 was recorded in Warmińsko-Mazurskie (3 years), the smallest in Wielkopolskie (0.9 years). For women, the decrease was the highest in Lubelskie (2.9 years), and the lowest in Opolskie (1.6 years). In the next two years, in 2022 and 2023, both in the entire country and in each voivodship, an increase in average life expectancy was observed. In 2023, the highest increase, compared to the previous year, for men was recorded in the Opolskie Voivodship (1.7 years), the lowest in Kujawsko-Pomorskie (0.8 years). The highest life expectancy for women was observed in Lubuskie and Łódzkie voivodships (1.2 years), the lowest in the Mazowieckie, Wielkopolskie and Zachodniopomorskie (0.7 years). It is worth noting that in 2023, in almost all voivodships, life expectancy for both men and women was higher than in 2019 (i.e. the last year before the COVID-19 pandemic). The exception is Zachodniopomorskie Voivodship, where it was 0.2 lower for men (0.2 higher for women).

In Poland there is a high diversity of life expectancy between voivodships. In 2023, the span between the highest and the lowest parameters for males was 3 years. The shortest life expectancy was observed among men living in the Łódzkie (73.2 years) and the longest was in the Małopolskie (76.2 years). Among women, the diversity is smaller and amounts to 2.5 years. For women the shortest life expectancy was observed in Śląskie (81.1 years) and the longest in Podkarpackie (83.6 years) (Map 1).

Significantly higher mortality for men compared to women is observed in all voivodships. In 2023, the disproportion between the average life expectancy of men and women was the highest in Podlaskie (8.6 years) and the lowest in Pomorskie and Śląskie (6.8 years).

Map 1. Life expectancy at birth in Poland by voivodships in 2023

Males



Females

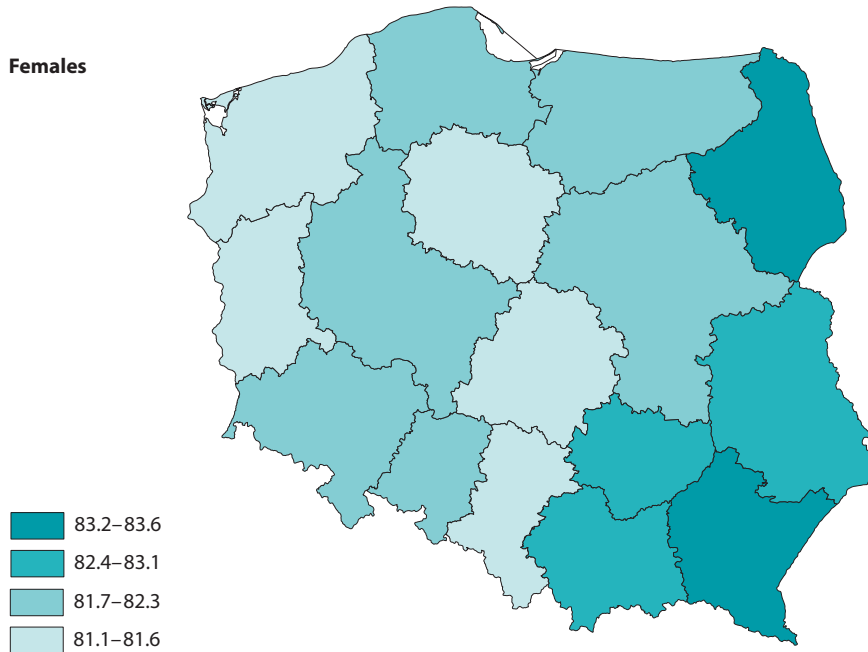


Table 3. Life expectancy at birth by voivodships in selected years

Voivodships	Males							Females						
	1990	2000	2010	2019	2020	2022	2023	1990	2000	2010	2019	2020	2022	2023
Total	66,2	69,7	72,1	74,1	72,6	73,4	74,7	75,2	78,0	80,6	81,8	80,7	81,1	82,0
Dolnośląskie	65,7	68,8	71,7	73,5	72,1	72,9	74,3	74,7	77,6	80,2	81,3	80,6	80,7	81,8
Kujawsko-pomorskie	65,7	69,6	71,4	73,7	72,4	73,3	74,1	74,6	77,5	79,8	81,0	80,4	80,2	81,3
Lubelskie	66,8	69,1	71,2	73,9	72,3	73,2	74,3	76,4	78,5	81,0	82,4	81,1	81,7	82,7
Lubuskie	65,2	69,2	71,5	72,9	71,8	72,6	74,1	74,6	77,4	80,1	81,0	80,0	80,3	81,5
Łódzkie	65,3	67,9	70,1	72,5	71,1	72,1	73,2	74,5	77,2	79,4	81,0	79,6	80,0	81,2
Małopolskie	68,0	71,3	73,7	75,3	73,8	74,9	76,2	76,3	78,8	81,4	82,7	81,6	82,2	83,1
Mazowieckie	66,6	69,8	72,6	74,3	72,8	73,8	74,8	75,9	78,6	81,0	82,1	80,9	81,5	82,2
Opolskie	66,5	70,7	73,0	74,5	73,0	73,6	75,3	74,9	78,2	80,4	82,0	81,0	81,4	82,3
Podkarpackie	68,0	71,2	73,7	75,4	73,7	74,7	76,1	76,4	79,0	81,8	83,2	81,8	82,5	83,6
Podlaskie	67,1	70,5	72,5	74,3	73,1	73,7	74,8	76,8	79,1	81,9	83,1	81,9	82,6	83,4
Pomorskie	66,0	70,6	73,0	74,8	73,3	73,8	75,2	74,7	78,1	80,8	81,8	81,2	80,9	82,0
Śląskie	65,8	69,6	71,6	73,8	72,3	72,8	74,3	74,2	77,2	79,7	80,8	80,0	80,2	81,1
Świętokrzyskie	66,7	70,5	71,8	73,8	72,0	72,9	73,9	76,0	78,6	80,9	82,2	80,9	81,5	82,4
Warmińsko-mazurskie	65,4	69,2	71,3	73,8	72,0	72,5	74,0	75,2	78,6	80,4	81,2	80,6	80,7	81,7
Wielkopolskie	65,8	69,7	72,5	73,0	72,8	73,6	74,8	74,9	77,5	80,5	81,5	80,5	81,0	81,7
Zachodniopomorskie	65,1	69,0	71,3	74,3	72,1	72,8	74,1	74,5	77,5	80,1	81,2	80,6	80,7	81,4
Urban areas	66,2	70,0	72,6	74,5	72,9	73,7	75,0	74,9	77,8	80,6	81,7	80,8	81,0	81,9
Dolnośląskie	65,9	69,2	72,1	73,7	72,3	73,1	74,4	74,5	77,5	80,2	81,4	80,9	80,9	81,9
Kujawsko-pomorskie	65,9	70,0	71,7	74,0	72,2	73,2	74,1	74,6	77,5	79,9	80,9	80,1	80,2	81,3
Lubelskie	67,1	70,0	72,7	75,1	73,5	74,2	75,1	76,4	78,5	80,8	82,6	81,1	81,9	82,8
Lubuskie	65,8	69,7	72,3	73,6	72,2	72,8	74,4	74,6	77,2	80,3	81,3	80,3	80,7	81,7
Łódzkie	64,9	67,8	70,3	73,0	71,3	72,2	73,3	74,0	76,7	79,2	80,7	79,6	79,7	81,1
Małopolskie	67,7	71,6	74,2	75,9	74,5	75,1	76,5	75,9	78,6	81,4	82,7	81,7	82,3	82,9
Mazowieckie	66,8	70,5	73,6	75,3	73,6	74,5	75,6	75,7	78,5	81,2	82,3	81,1	81,8	82,2
Opolskie	67,0	70,7	73,0	75,2	73,5	73,7	75,6	74,8	78,3	80,4	81,9	81,2	81,7	82,4
Podkarpackie	68,3	71,8	74,5	76,3	74,5	75,9	77,0	76,5	78,7	82,1	83,5	82,2	82,8	83,6
Podlaskie	66,5	70,9	73,5	75,3	73,5	74,6	75,8	76,4	78,8	82,2	83,3	82,0	82,8	83,5
Pomorskie	66,2	71,1	73,4	75,5	73,9	74,1	75,8	74,8	78,0	81,0	82,1	81,6	81,2	82,4
Śląskie	65,4	69,4	71,5	73,6	72,1	72,7	74,1	73,9	77,0	79,5	80,6	79,8	79,9	81,0
Świętokrzyskie	67,2	70,6	72,9	74,7	72,5	73,4	74,7	76,1	78,5	81,0	82,3	80,6	81,4	82,2
Warmińsko-mazurskie	66,0	70,3	72,2	73,7	72,4	73,3	74,8	75,3	78,6	80,4	81,6	81,0	81,0	81,8
Wielkopolskie	66,0	70,0	73,1	74,7	73,3	74,0	75,1	74,8	77,5	80,4	81,8	80,7	81,1	81,8
Zachodniopomorskie	65,9	69,5	72,1	73,9	72,6	73,0	74,3	74,4	77,4	80,3	81,5	80,7	80,8	81,5

Table 3. Life expectancy at birth by voivodships in selected years (cont.)

Voivodships	Males							Females						
	1990	2000	2010	2019	2020	2022	2023	1990	2000	2010	2019	2020	2022	2023
Rural areas	66,2	69,4	71,4	73,4	72,1	73,0	74,2	75,8	78,4	80,7	81,8	80,6	81,1	82,1
Dolnośląskie	65,3	67,9	70,7	72,7	71,7	72,4	74,0	75,0	77,8	80,2	81,0	79,8	80,1	81,5
Kujawsko-pomorskie	65,3	69,0	70,9	73,3	72,7	73,5	74,0	74,6	77,6	79,6	81,1	80,8	80,3	81,2
Lubelskie	66,4	68,4	70,1	72,9	71,3	72,4	73,7	76,5	78,5	81,2	82,3	81,2	81,5	82,5
Lubuskie	64,0	68,3	70,4	71,6	71,2	72,1	73,3	74,6	77,8	79,6	80,3	79,4	79,6	81,0
Łódzkie	65,9	68,2	70,0	71,8	70,7	72,0	72,9	75,3	78,2	80,0	81,7	79,8	80,6	81,6
Małopolskie	68,2	71,0	73,3	74,8	73,2	74,6	75,9	76,7	79,1	81,4	82,7	81,5	82,2	83,3
Mazowieckie	66,2	68,8	70,8	72,6	71,4	72,5	73,5	76,2	78,9	80,8	81,7	80,4	81,0	82,1
Opolskie	65,9	70,8	72,9	73,8	72,3	73,4	74,9	74,9	78,0	80,4	82,2	80,6	81,1	82,1
Podkarpackie	67,8	70,8	73,2	74,7	73,1	74,0	75,5	76,4	79,2	81,5	82,9	81,5	82,2	83,6
Podlaskie	67,3	69,9	71,3	72,9	72,5	72,4	73,5	77,1	79,4	81,4	83,0	81,7	82,4	83,2
Pomorskie	65,5	69,3	71,9	73,5	72,3	73,1	74,1	74,7	78,3	80,0	80,9	80,2	80,2	81,1
Śląskie	67,0	70,1	72,0	74,3	73,1	73,2	74,9	75,7	77,9	80,5	81,6	80,3	81,2	81,5
Świętokrzyskie	66,2	70,3	70,8	73,0	71,5	72,5	73,3	75,9	78,7	80,8	82,2	81,0	81,6	82,5
Warmińsko-mazurskie	64,5	67,9	70,0	72,0	71,4	71,5	72,9	75,2	78,6	80,3	80,5	79,8	80,1	81,4
Wielkopolskie	65,6	69,3	71,8	73,8	72,2	73,2	74,3	75,1	77,6	80,5	81,2	80,2	80,6	81,4
Zachodniopomorskie	63,4	67,9	69,6	72,9	71,1	72,1	73,6	74,8	77,4	79,4	80,2	80,2	80,1	81,1

3.3. Subregions and the largest cities

In 2023, the disparity between the extreme values of life expectancy in Polish subregions was 5.3 years for men and 3.8 years for women (Map 2). The longest life expectancy was for men in Cracow (77.1 years), and the shortest in the Ciechanowski subregion (71.8 years). The longest life expectancy for women was noted in Tarnobrzanski Subregion (84.1 years), and the shortest in Katowicki (80.3 years).

Among the subregions, those comprising the largest cities in the country, with 6.4 million inhabitants (i.e. 16.9% of the total population of the country) are particularly noteworthy. These include the following cities: Cracow, Łódź, Poznań, Szczecin, Warsaw, Wrocław, as well as the Katowicki and Trójmiejski subregions. Of these, in five subregions, both men and women lived longer than the national average.

In 2023, the longest life expectancy for men was recorded in Cracow (75.9 years), for women in Trójmiejski Subregion (83 years). The shortest was observed for men in Łódź (73.3 years) and for women – in Katowicki subregion (79.2 years). The biggest difference between the life expectancy of men and women was noted in Łódź (7.5 years). Compared to other large cities, Katowicki subregion and Łódź look very unfavorable, as their life expectancy is more than a year shorter than the national average (Chart 4).

Map 2. Life expectancy at birth in Poland by subregions in 2023

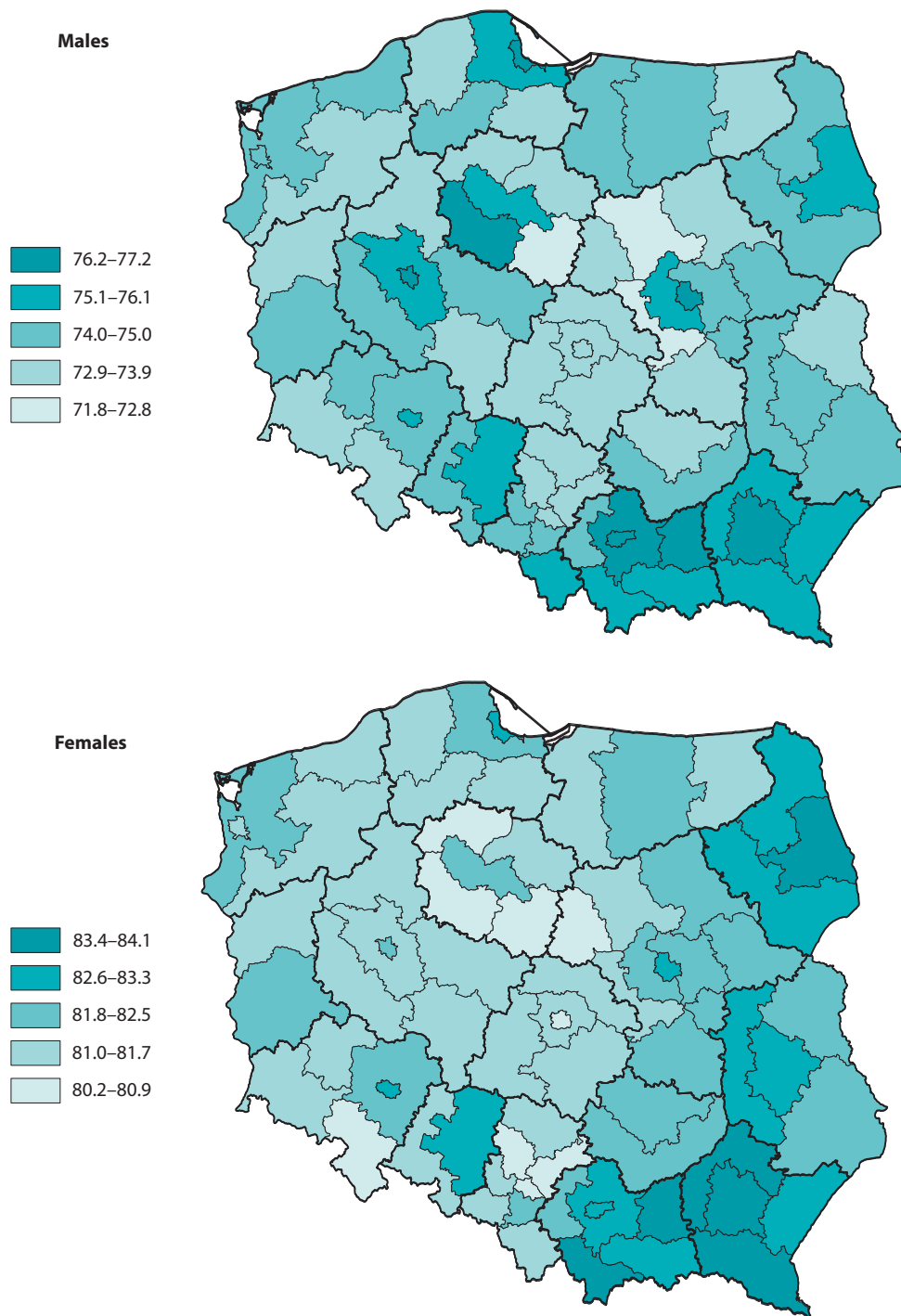
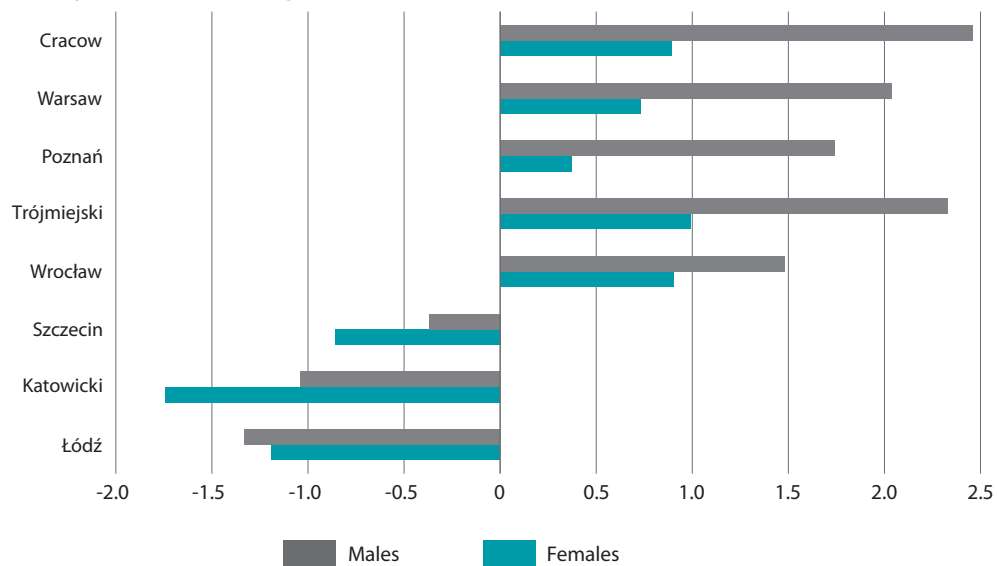


Chart 4. Life expectancy in selected subregions in relation to the national level in 2023

Chapter 4. International comparison

This chapter presents the results of comparative analysis of life expectancy at birth in selected European countries in 2022 based only on data published by Eurostat (03.04.2024).

In terms of average life expectancy for men, Poland (73.4 years) was placed 28th out of 34 European countries included in the analysis, ahead of: Balkan countries (Bulgaria, Serbia), Carpathian countries (Hungary, Romania) and Baltic countries (Latvia and Lithuania). In the case of women, Poland (81.1 years) was four positions higher in this ranking because, in addition to the countries already mentioned, the average life expectancy was also shorter in Albania, Croatia, Slovakia and Turkey (Table 4).

There was large variation in life expectancy across Europe (Map 3). The longest life expectancy for men was recorded in Liechtenstein (83 years), Switzerland (81.8 years) and Sweden (81.7 years), and the shortest in Latvia (69.4 years) and Bulgaria (70.6 years). Among women, the longest life expectancy was recorded in Spain (85.9 years) and Switzerland (85.5 years), and the shortest in Bulgaria (77.9 years) and Serbia (77.9 years).

In countries where life expectancy was relatively short, the difference between men's and women's life expectancy was, with few exceptions, very large. The countries in which this difference was the largest were Latvia (10.0 years), Lithuania (8.7 years), Estonia (8.7 years) and Romania (7.9 years), and the smallest difference was observed in Liechtenstein (2.3 years), Iceland (2.5 years) and the Netherlands (2.9 years).

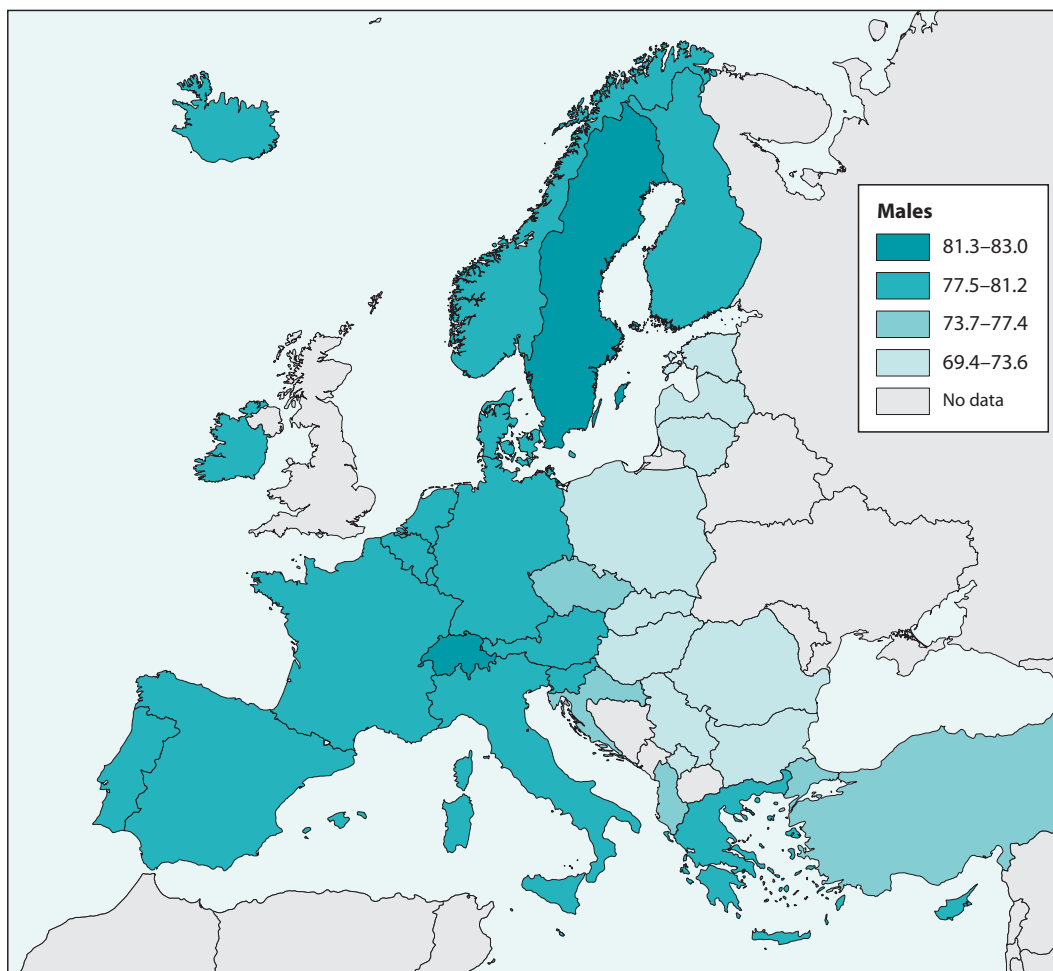
Table 4. Average life expectancy of a newborn in selected European countries in 2022

Country	Males	Females	Difference
Albania	77.4	80.9	3.5
Austria	79.1	83.6	4.5
Belgium	79.7	83.9	4.2
Bulgaria	70.6	77.9	7.3
Croatia	74.6	80.8	6.2
Cyprus	79.7	83.4	3.7
Czechia	76.1	81.9	5.8
Denmark	79.5	83.2	3.7
Estonia	73.6	82.3	8.7
Finland	78.7	83.8	5.1
France	79.3	85.1	5.8
Germany	78,3	83.0	4.7
Greece	78.3	83.4	5.1
Hungary	72.6	79.3	6.7
Iceland	80.9	83.4	2.5
Ireland	80.9	84.2	3.3
Italy	80.7	84.8	4.1
Latvia	69.4	79.4	10.0
Lichtenstein	83.0	85.3	2.3
Lithuania	71.4	80.1	8.7
Luxembourg	80.8	85.2	4.4
Malta	80.4	84.6	4.2
Netherlands	80.2	83.1	2.9

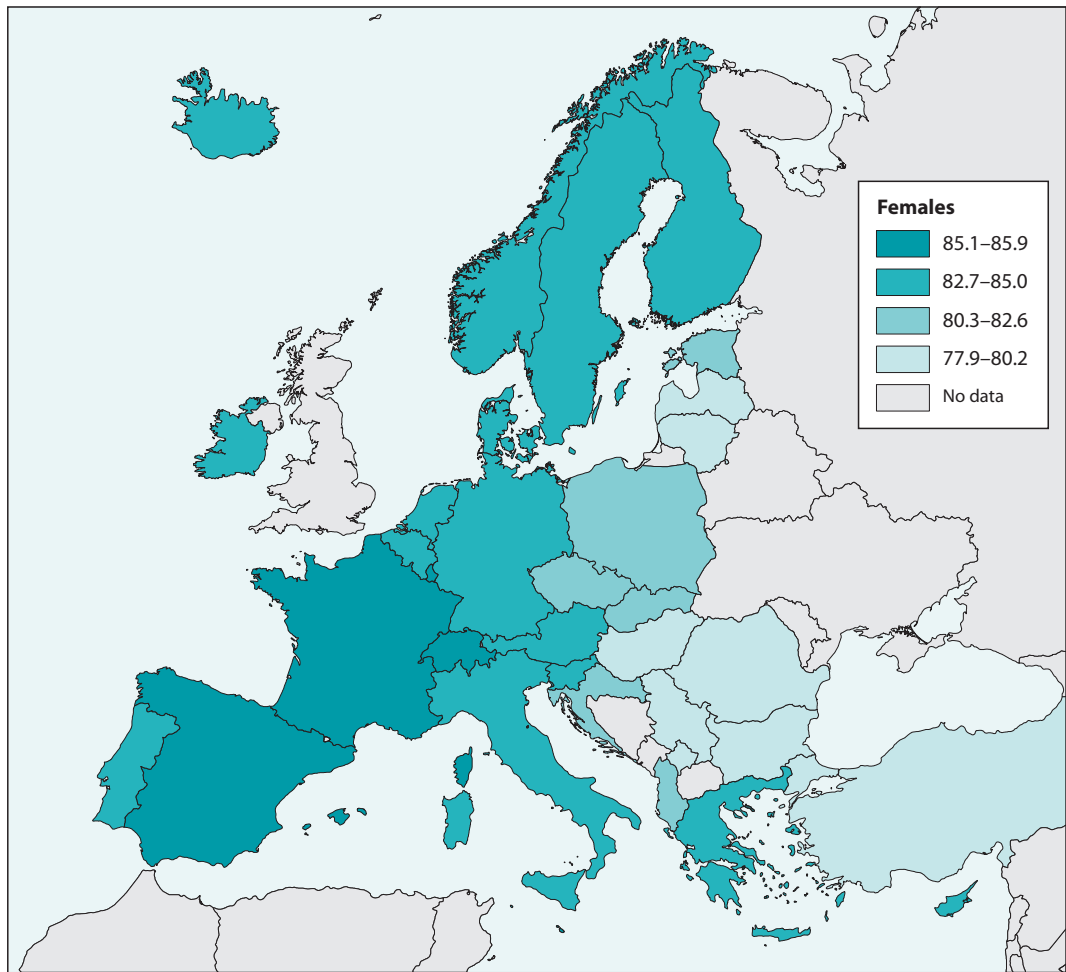
Table 4. Average life expectancy of a newborn in selected European countries in 2022 (cont.)

Country	Males	Females	Difference
Norway	80.9	84.2	3.3
Poland	73.4	81.1	7.7
Portugal	78.9	84.5	5.6
Romania	71.3	79.2	7.9
Serbia	72.7	77.9	5.2
Slovakia	73.6	80.5	6.9
Slovenia	78.6	84.1	5.5
Spain	80.5	85.9	5.4
Sweden	81.4	84.8	3.4
Switzerland	81.8	85.5	3.7
Türkiye	74.3	78.4	4.1

Source: Eurostat (03.04.2024)

Map 3. Life expectancy at birth in European countries in 2022

Map 3. Life expectancy at birth in European countries in 2022 (cont.)



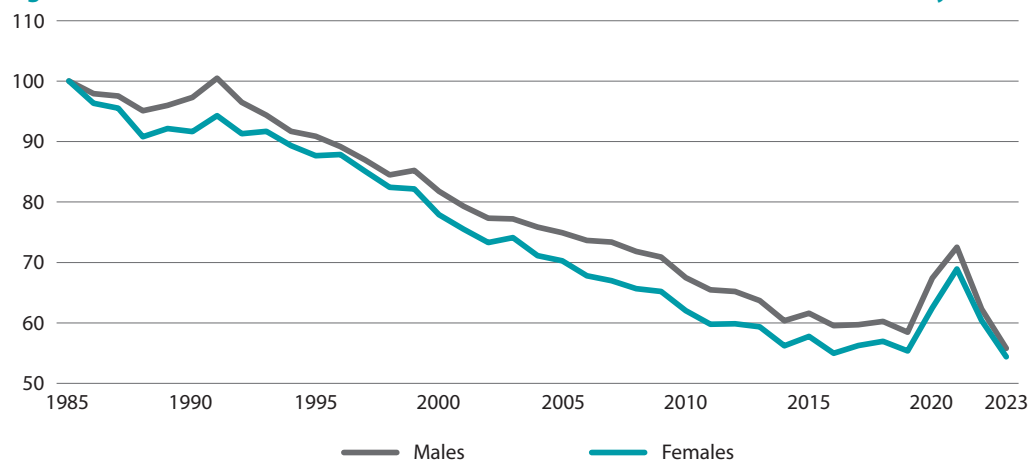
Source: Eurostat (03.04.2024)

Chapter 5. Mortality in Poland

In this chapter an additional analysis of life expectancy in Poland is presented. For this purpose a study of mortality (total and divided into five groups of causes of death, which have the most impact on life expectancy) was used. Additionally, charts 5-11 show the change in the value of standardized death rates compared to 1985.¹ The development of data on causes of death is a long and complex process, and thus the results are available only at the end of the following year (Stańczyk i in., 2018). For this reason, the analysis of mortality by cause of death is presented with a one-year shift.

In order to control the influence of changing age structure on death rates, a method of direct standardization has been applied. It allows to answer the following question: what would death rates be if the population structure was the same during the entire period of analysis. As the standard, the population structure from 2010, which had been estimated using the results of 2011 population census, was used.

Chart 5. Change in the value of standardized death rates for males and females 1985-2023 (1985 year = 100)



Between 1990 and 2019, despite periodic fluctuations, the overall level of death rates tended to decrease. However, the spread of the COVID-19 disease has resulted in a sharp increase in standardized death rates (Chart 5). In 2022, a reversal of this trend was observed, with 937 people dying per 100 thous. of population, 144 less than the year before. The following year, this value decreased further by another 95 deaths. In 2023, the standardized death rate was 842.

Throughout the whole analysed period, mortality of men was higher in every age group (Table 5). During the entire analysed period the death rates among men below 60 years of age were about 2.6 times higher than women of the same age. Among older people (60 years and more) the difference gets smaller.

¹ Indicators of dynamics (single-base indexes) were used – which inform about changes in the level of the phenomenon in subsequent periods (y_t) compared with the level of the phenomenon from one fixed period (y_0) adopted for the comparative period (Statistics Poland, 2024) (in the presented analysis it is 1985).

$$i = \frac{y_t}{y_0} \cdot 100$$

Table 5. Standardized death rates for males and females by age in selected years (per 100 thous. of population)

Years	0-44 years		45-59 years		60 years and more	
	males	females	males	females	males	females
1985	247.0	109.3	1426.0	567.3	6986.5	5673.2
1990	253.7	103.0	1481.8	544.7	6618.9	5168.1
1995	220.9	86.2	1400.0	501.8	6221.8	4993.5
2000	177.7	67.2	1216.5	474.7	5736.2	4434.1
2005	158.0	57.6	1168.4	441.5	5200.5	3993.6
2010	137.3	47.2	1049.1	399.2	4710.8	3524.6
2015	118.1	41.5	907.0	356.3	4396.0	3303.2
2020	124.9	43.9	922.8	353.5	4925.6	3609.0
2021	133.4	49.1	982.3	382.2	5312.5	3985.6
2022	124.8	47.2	850.1	321.9	4515.3	3491.5
2023	116.0	44.1	750.7	291.0	4042.3	3140.8

5.1. Mortality by selected groups of death causes and age 1985-2022

In Poland the main causes of deaths are cardiovascular, neoplasms and respiratory diseases (Table 6 and 7). In 2022, they were responsible for almost 66% of all deaths.

Table 6. Standardized death rates by selected groups of causes in selected years (per 100 thous. of population)

Years	Total	Deaths from diseases of the cardiovascular	Deaths from neoplasms	Deaths from external causes	Deaths from diseases of the respiratory system	Deaths from diseases of the digestive system
1985	1508	819	250	88	82	47
1990	1426	785	258	92	58	43
1995	1347	711	262	86	47	43
2000	1204	597	270	75	62	46
2005	1097	516	265	70	56	48
2010	983	452	249	61	50	42
2015	909	405	248	49	55	35
2020	994	347	233	49	59	42
2021	1081	359	217	52	58	46
2022	937	323	226	49	62	46

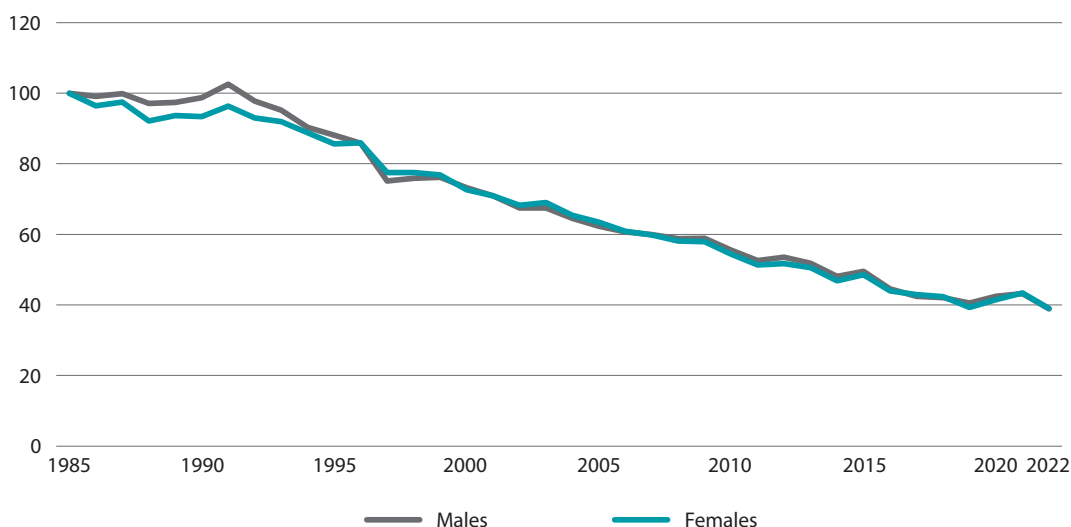
Table 7. Standardized death rates by selected groups of causes, age and sex in selected years (per 100 thous. of population)

	Deaths from neo-plasms		Deaths from diseases of the cardiovascular		Deaths from external causes		Deaths from diseases of the respiratory system		Deaths from diseases of the digestive system	
	males	females	males	females	males	females	males	females	males	females
0-44 years										
1985	39.7	14.2	23.1	21.5	96.1	18.1	6.7	4.7	7.5	3.0
1990	43.6	14.0	22.1	21.4	105.0	18.1	5.2	3.6	7.1	2.8
1995	32.8	10.3	19.6	20.1	93.1	17.6	4.3	2.5	10.0	2.9
2000	24.0	7.6	17.2	17.2	77.0	14.8	3.9	2.1	10.5	2.8
2005	20.1	6.2	14.6	15.0	69.0	13.0	3.1	1.7	10.2	2.7
2010	19.3	5.7	12.0	11.9	60.0	9.7	3.7	1.8	9.6	2.9
2015	16.6	4.6	10.9	11.2	47.6	7.9	3.9	2.0	8.2	2.6
2020	10.5	3.3	10.0	9.9	50.6	9.6	4.5	2.0	12.4	3.7
2021	12.2	3.5	9.3	9.7	45.7	8.6	4.8	1.9	13.0	4.6
2022	11.1	3.6	10.6	10.4	44.3	9.2	5.9	2.7	12.9	4.7
45-59 years										
1985	577.0	201.8	390.5	218.0	165.5	31.2	63.7	20.1	63.3	26.0
1990	607.2	193.8	406.5	214.3	186.4	31.5	47.0	13.7	56.0	22.7
1995	521.7	159.5	385.7	217.4	187.6	30.9	31.6	10.4	69.4	22.8
2000	425.5	128.4	346.8	222.4	156.9	29.1	31.7	14.8	80.5	25.3
2005	363.9	103.7	320.4	217.3	166.7	28.5	32.9	11.8	89.0	28.0
2010	325.4	85.8	280.1	201.4	154.7	25.2	36.0	12.9	80.5	27.5
2015	281.1	78.6	240.1	176.2	115.1	19.3	34.6	13.0	71.0	25.6
2020	209.5	55.6	201.3	155.8	109.2	16.2	36.9	14.0	85.8	30.7
2021	217.9	57.8	185.4	141.1	106.7	17.9	38.3	12.9	92.2	33.7
2022	197.9	51.1	182.6	141.5	100.2	16.5	39.9	12.1	91.9	21.4
60 years and more										
1985	3961.3	3607.2	1239.0	671.6	208.9	150.5	553.9	237.4	207.2	160.0
1990	3844.9	3359.9	1299.5	682.1	213.5	140.9	396.6	160.6	190.1	146.8
1995	3482.1	3108.0	1368.4	705.2	190.4	134.4	311.9	139.9	176.6	134.3
2000	2913.8	2645.5	1459.5	754.3	184.9	117.4	391.3	216.6	187.6	144.1
2005	2480.0	2320.4	1446.3	755.4	178.2	94.8	369.2	187.8	192.0	146.3
2010	2202.9	1989.4	1363.6	731.6	165.6	73.0	320.1	160.1	164.2	122.0
2015	1976.9	1777.6	1363.5	771.4	139.2	64.3	328.4	195.2	134.9	95.1
2020	1752.4	1531.0	1258.8	766.7	133.6	62.9	350.5	204.3	156.6	105.8
2021	1771.6	1601.9	1165.2	727.1	158.4	81.5	328.3	209.1	170.7	119.5
2022	1595.8	1439.9	1215.4	763.5	150.7	73.9	344.3	227.6	172.6	118.1

The primary cause of death in Poland are cardiovascular diseases. In 2022 there were close to 36% of deaths due to these diseases. Since 1992 the share of these diseases in total number of deaths has decreased significantly (Chart 6).

In 2022, the standardized death rate from cardiovascular disease was 323 per 100 thous. persons, 36 people less than the year before (Table 6). This is about 54% of the value from 2000, but still the frequency of deaths as a result of these diseases is very high.

Chart 6. Change in the value of standardized death rates due to cardiovascular diseases for males and females 1985-2022 (1985 year = 100)



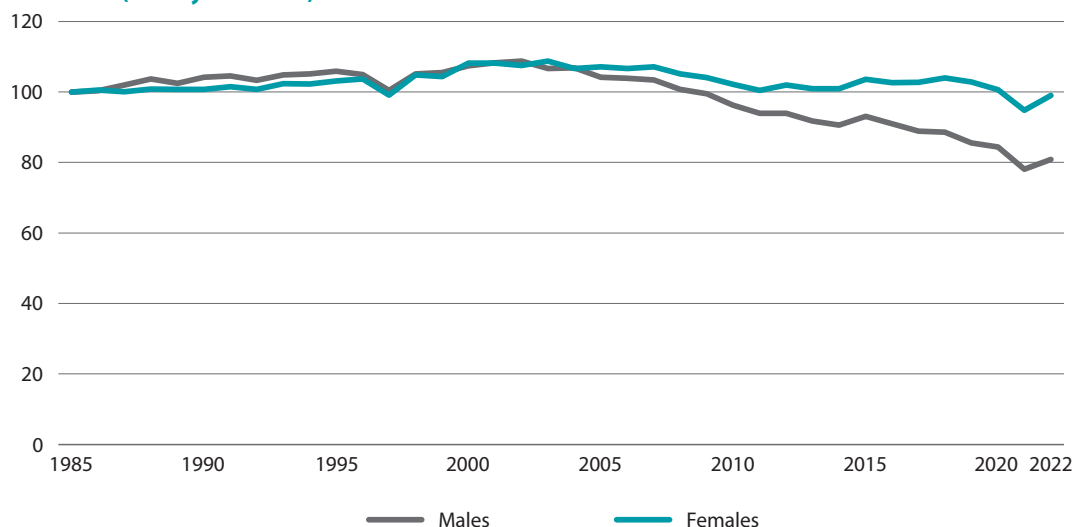
In 2022, the death rate from cardiovascular disease among men under the age of 45 was almost three times higher than among women of the same age (Table 7). This relationship was similar in the group of people aged 45-59 (the proportion was 3.9), and the value of this coefficient was several times higher than among younger people. After a significant increase in the number of deaths from this cause for men aged 45-59 in the 1980s, in the 1990s it began to decline. The level of women's deaths due to cardiovascular diseases in the same age group did not change significantly for many years and only – starting from 1992 – it began to systematically decrease. Cardiovascular diseases are, next to cancer, the most common cause of death for people over 45 years of age, and in particular they are clearly the dominant cause among women over 60 years of age.

The oldest age group is characterised by the fact that male death rate from these diseases is only slightly higher than female, while in younger age groups the mortality for males is much higher than for females.

The second most common cause of death are neoplasms, causing – nearly 24% of all deaths in 2022, and standardized death rate caused by this diseases was 226 per 100 thous. persons. In 2022, an increase in mortality was observed in almost all age groups (except men aged 45-59).

In Poland, a constant increase of standardized death rates caused by neoplasms was observed from 1980 till 2001 (Chart 7). The beginning of the new century has brought a change of this tendency – a decrease of the standardized death rate for the whole population has been observed (Table 6). Such a situation was a result of a rapid decrease of death rates caused by neoplasms among people younger than 44 years old (Table 7). During the last 30 years the death rate of males and females at this age decreased twice. In 2022 the death rate from cancer among people aged 0-44 years was several times lower than the level noted among aged 45-59 years.

Chart 7. Change in the value of standardized death rates due to neoplasms for males and females 1985-2022 (1985 year = 100)



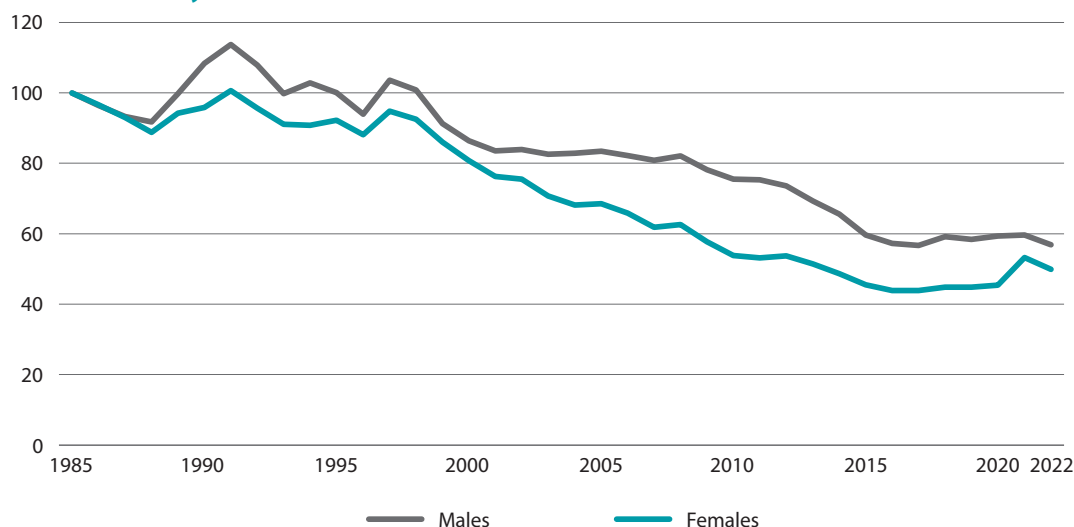
A rapid decline in neoplasm mortality observed from 1991 till 1997 among men aged 45-59 decelerated in the following years. Since 2002 a decline of frequency of neoplasms mortality can be observed again. In case of women, the cancer death rate has remained fairly stable for almost twenty five years. In older age groups (60 years and more), the mortality of males, caused by neoplasms had kept increasing until 2004. During next ten years the decline of death rates was observed.

In 2022, for men over 60 years of age, the standardized death rate from neoplasms was 1215 per 100 thous. Among women in the same age, the rate of deaths caused by neoplasms increased by 36 deaths per 100 thous. compared to the previous year. It should be noted that for men aged 60 and more, the level of death due to neoplasms was over six times higher than for men aged 45-59 and over eight times higher than for women aged 45-59, while the same proportions for women aged 60 and more were 4 and 5.4, respectively.

In 2022 deaths due to external reasons (mainly accidents and injuries) made up 4.5% of all deaths. A positive tendency of decreasing the mortality from these causes slowed down slightly in 2018 (Chart 8). In 2022 standardized death rate was 49 per 100 thous. persons and constituted 50% of the maximum value observed during in analysed period, in 1991, when it was 88 deaths per 100 thous. persons.

External causes are the most frequent reasons of death among young men aged below 45 (Table 7). In fact, in 2022 it comprised almost 33% of all deaths among males at this age. The death rate among men in this group is above five times higher than among women. Men aged 45-59 also die from accidents and injuries much more often (almost six times) than women, while those over 60 years old die almost twice as often. The share of external causes in total deaths decreases with age. Proportion of these causes of death, among people aged over 60, was 3.3% for males and 2.1% for females.

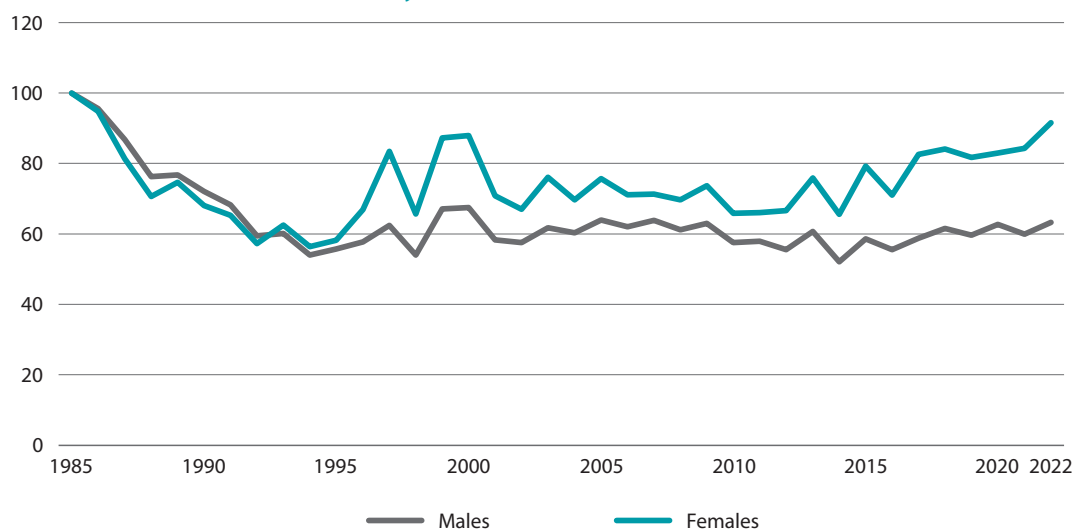
Chart 8. Change in the value of standardized death rates due to external causes for males and females 1985-2022 (1985 year = 100)



In Poland, in 2022, respiratory diseases were responsible for 6.7% of all deaths, and standardized death rate was 62 per 100 thous. persons. After the decline in mortality due to these diseases for several years, the death rate has remained at a similar level since the beginning of the 21st century. However in the case of women, an upward trend has been observed since 2013 (Chart 9).

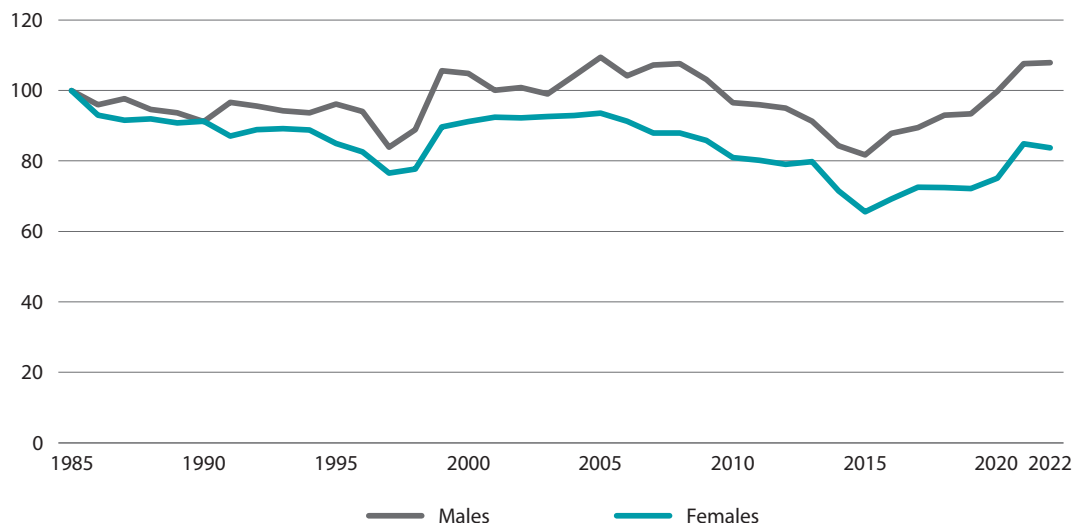
For persons aged 60 and more, the incidence of deaths as a result of respiratory diseases was over 8 times higher than for those aged 44-59 in case of men and almost 19 times higher in case of women (Table 7).

Chart 9. Change in the value of standardized death rates due to diseases of the respiratory system for males and females 1985-2022 (1985 year = 100)



Similar changes concern death rates caused by digestive disorders, but at a slightly lower level (Table 6, Chart 10). In the first half of the 80s, the death rate reached 38-39 per 100 thous. people, during the subsequent ten years it decreased to 35-36 and it increased again to 38-39 deaths per 100 thous. people between 2004-2008.

Changes in the overall death rate due to digestive disorders were primarily influenced by the increase in mortality among men aged over 45 and women aged 60 and more. In 2022, this value was 46.

Chart 10. Change in the value of standardized death rates due to digestive system diseases for males and females 1985-2022 (1985 year = 100)

In 2020, an additional cause of death was identified, related to the COVID-19 disease. In 2021 this disease was responsible for almost 18% of all deaths, and in 2022 only 6.7%. The standardized death rate in 2022 was 62 per 100 thous. population and was over three times smaller than in the previous year.

The rate of deaths from this cause significantly increases with age (Table 8). For men in the oldest age group, the standardized death rate was nearly 10 times higher than for those aged 44-59, while the analogous proportion for women was above 14. In addition, the standardized death rate for men was about 1.5 times higher than for women in each of the analysed age groups.

Table 8. Standardized death rates due to COVID-19 diseases including age and sex in 2020-2022 (per 100 thous. of population)

	0-44 years		45-59 years		60 years and more	
	male	female	male	female	male	female
2020	3.8	1.9	60.2	25.9	531.6	290.6
2021	11.2	5.8	135.5	64.0	1069.6	707.3
2022	3.1	1.8	32.0	17.0	333.4	248.4

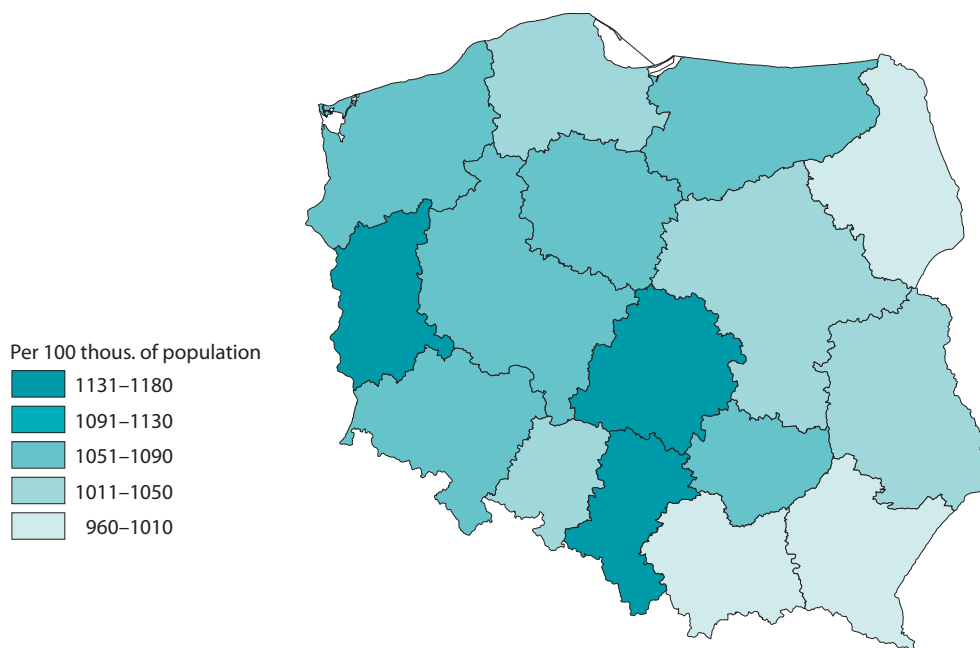
5.2. Mortality by voivodships in 2023

In order to analyse mortality at regional level in 2023 the standardized death rates for individual voivodships have been counted. For calculation of such death rates a nationwide population structure (according to age, in 2023) was used.

In 2023, the highest mortality rate was recorded in the Łódzkie Voivodship (Table 9, Map 4), where the standardized death rate was 1174 deaths per 100 thous. people. A rather low death rates – in comparison to other regions of Poland – was recorded in Małopolskie and Podkarpackie Voivodships (less than 1000 people). In 2023, in almost all voivodships, the death rates were higher in rural areas than in urban areas. The exception was the Śląskie Voivodship, where 7 more deaths per 100 thous. were registered in cities compared to rural areas. The largest difference was noted in the Podlaskie, Pomorskie and Warmińsko-Mazurskie voivodships (more than 170 deaths per 100 thous. population), and the smallest in the Śląskie Voivodship.

Table 9. Standardized death rates by voivodships in 2023 (per 100 thous. of population)

	Voivodships	Total	Urban Areas	Rural Areas
00	Total	1085	1056	1139
02	Dolnośląskie	1098	1074	1176
04	Kujawsko-pomorskie	1128	1102	1180
06	Lubelskie	1077	1004	1145
08	Lubuskie	1139	1092	1249
10	Łódzkie	1174	1157	1207
12	Małopolskie	996	973	1025
14	Mazowieckie	1066	1019	1164
16	Opolskie	1060	1028	1106
18	Podkarpackie	965	910	1009
20	Podlaskie	1002	930	1111
22	Pomorskie	1053	1006	1178
24	Śląskie	1135	1138	1131
26	Świętokrzyskie	1101	1039	1161
28	Warmińsko-mazurskie	1122	1061	1233
30	Wielkopolskie	1105	1064	1171
32	Zachodniopomorskie	1127	1100	1210

Map 4. Standardized death rates by voivodships in 2023

5.3. Mortality by selected groups of death causes and voivodships in 2022

The analysis of mortality by selected groups of causes of death and voivodships is based on the 2022 data. For a calculation of standardized death rates for individual voivodships a nationwide population age structure from 2022 was used.

In 2022, the highest level of mortality due to cardiovascular diseases was recorded in the Lubuskie and Dolnośląskie voivodships (Table 10, Chart 11), where the standardized death rate was, respectively, 520 and 546 deaths per 100 thous. people. This rate was 67% higher than in the Mazowieckie Voivodship, which had the lowest mortality rate (326 deaths).

As in the last two years, the highest intensity of deaths due to neoplasms was recorded in the Kujawsko-Pomorskie Voivodship, where the standardized rate was 305 deaths per 100 thous. people. The lowest mortality rate was recorded in the Podkarpackie Voivodship (232 people).

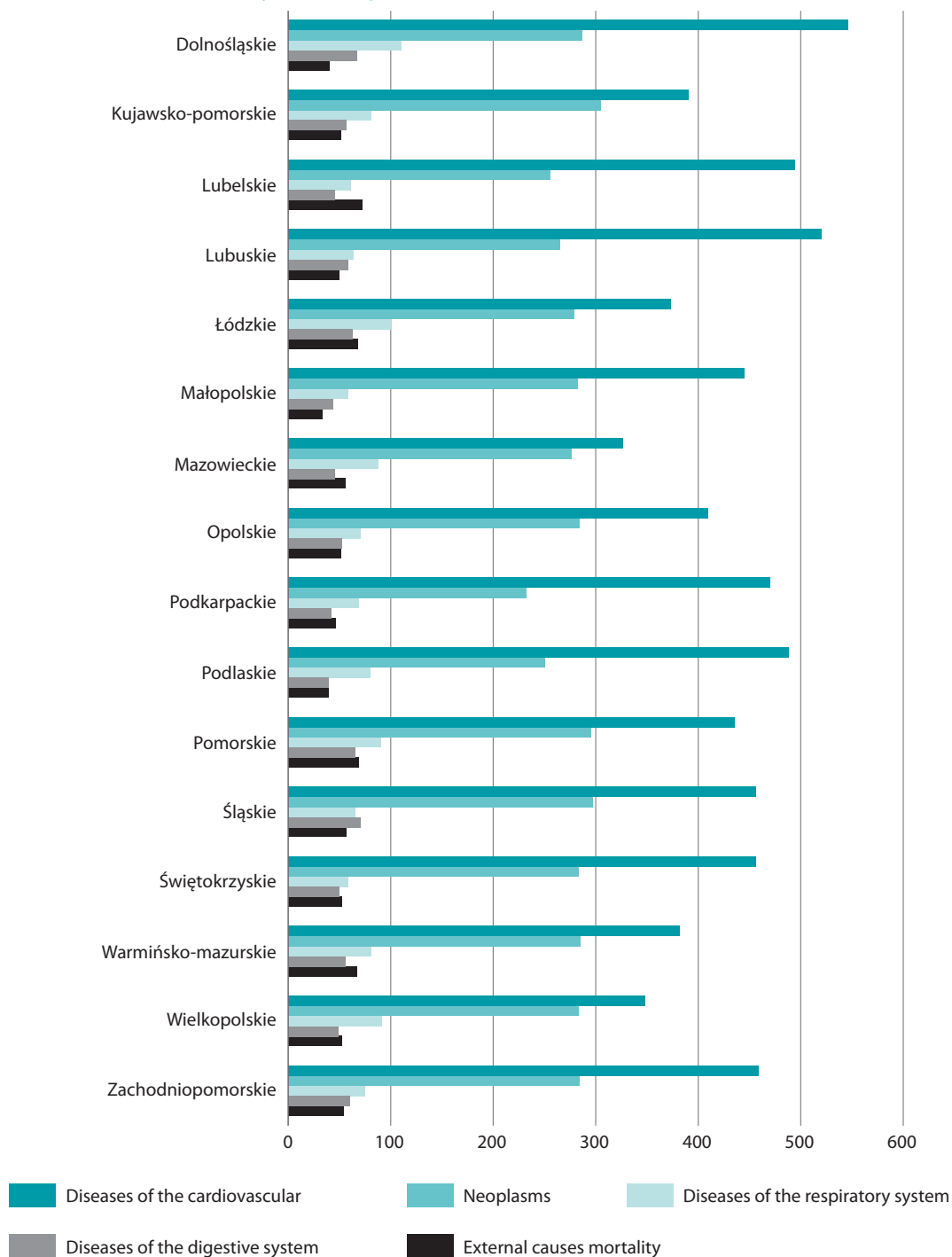
The highest frequency of deaths caused by external reasons was noted in Lubelskie Voivodship. In 2022, the value of the standardized death rate was 72. The lowest value was noted in the Małopolskie Voivodship – 33 people per 100 thous. population.

The lowest level of mortality due to respiratory diseases were noted in the Małopolskie and Świętokrzyskie voivodships – 58 deaths per 100 thous. people. The highest death rate was recorded in the Dolnośląskie and Łódzkie voivodships (at least 100 deaths). The highest death rates caused by digestive disorders was observed in the Pomorskie, Dolnośląskie and Śląskie voivodships – over 65 deaths per 100 thous. people. The lowest – in Podlaskie Voivodship (39) (Chart 11).

Table 10. Standardized death rates by selected groups of causes and voivodships in 2022 (per 100 thous. of population)

Voivodships		Total	Deaths from diseases of the cardiovascular	Deaths from neoplasms	Deaths from external causes	Deaths from diseases of the respiratory system	Deaths from diseases of the digestive system
00	Total	1186	426	280	54	79	54
02	Dolnośląskie	1223	546	287	40	110	67
04	Kujawsko-pomorskie	1222	390	305	51	81	57
06	Lubelskie	1164	494	255	72	61	45
08	Lubuskie	1233	520	265	50	64	58
10	Łódzkie	1279	373	279	68	100	63
12	Małopolskie	1090	445	282	33	58	44
14	Mazowieckie	1146	326	276	56	88	45
16	Opolskie	1168	409	284	51	70	52
18	Podkarpackie	1074	470	232	46	69	42
20	Podlaskie	1112	488	250	39	80	39
22	Pomorskie	1169	435	295	69	90	65
24	Śląskie	1243	456	297	57	65	70
26	Świętokrzyskie	1199	456	283	52	58	50
28	Warmińsko-mazurskie	1239	382	285	67	81	56
30	Wielkopolskie	1195	348	283	52	91	49
32	Zachodniopomorskie	1229	459	284	54	75	60

Chart 11. Standardized death rates by selected groups of causes in 2022 (per 100 thous. of population)



Chapter 6. Conclusion

Life expectancy is a key measure of population health. Projections published by Eurostat and the United Nations, based on analyses of changes taking place in the world, predict that life expectancy will increase in most countries, including Poland. Similar results are presented in projections prepared by Statistics Poland.

This is due to the fact that in most countries, a significant increase in life expectancy has been observed in recent years. One of the key reasons for this phenomenon was the significant progress in the diseases prevention of and healthcare. The decline in the infant mortality rate, which is taking place in the majority of countries around the world (including Poland) was also very important factor.

The increase in average life expectancy observed in Poland over the last three decades has been rapidly stopped by the effects of the SARS-CoV-2 pandemic. The results of the life expectancy analysis indicate a reversal of the downward trend and a return to the growth observed before the pandemic. Life expectancy in 2023, for both women and men, was the highest recorded in the history of Poland.

Currently, other phenomena are also observed that may potentially contribute to slowing down the increase in life expectancy in Poland. The significant increase in the number of obese people is also troubling. According to Eurostat data for Poland in 2019, the percentage of people with a BMI above the norm was 56.8² (Eurostat. European Health Interview Survey, 2019). According to the results of a pooled analysis of representative studies on worldwide trends in underweight and obesity in the years 1990-2022, the incidence of obesity in Poland among women over 20 years of age in 2022 was 24.6% (an increase of 7.4 percentage points since 1990 r.). For men it was 32.2%, i.e. 20.8 percentage points more compared to 1990 (Non-Communicable Disease Risk Factor Collaboration, 2024).

Air pollution and the associated increase incidence of respiratory diseases, some cancers, as well as circulatory system diseases may also be an important factor (Jędrak et al., 2017). Moreover, previous studies have shown that long-term exposure to dust with a diameter of no more than 2.5 µm (PM2.5 dust) reduces life expectancy (Pope et al., 2009).

Research conducted by various countries proves that apart from sex and place of residence, the factors that differentiate life expectancy include i.a.: education and socio-economic status. Therefore, there is no doubt that it is necessary to conduct further systematic analyses of life expectancy and mortality, which will enable to observe their changes in the near future. Therefore, it is advisable to take into account additional variables and indicators that will give a more complete picture of the diversity of these phenomena.

2 BMI above the norm: 25.00-29.99 is overweight; 30.00 or more is obesity

Chapter 7. List of publications on life expectancy

Polish complete life tables

1. Statistics Poland [1938]; Polskie tablice wymieralności 1931/32, (*Polish complete mortality 1931/1932*), „Statystyka Polski”, seria C, 91/1938, Warsaw
2. Statistics Poland [1956]; Polskie tablice wymieralności 1952/1953, (*Polish complete mortality 1952/1953*), (ed. R. Zasępa), „Przegląd Statystyczny”, 4/1956, Warsaw
3. Statistics Poland [1960]; Polskie tablice wymieralności 1955/1956, (*Polish complete mortality 1955/1956*), (ed. J. Z. Holzer), „Statystyka Polski”, 32/1960, Warsaw
4. Statistics Poland [1964]; Polskie tablice wymieralności 1960/61, (*Polish complete mortality 1960/1961*), (ed. J. Z. Holzer), „Statystyka Polski”, 91/1964, Warsaw
5. Statistics Poland [1968]; Polskie tablice wymieralności 1965/1966, (*Polish complete mortality 1965/1966*), (ed. J. Aleksyńska), „Studia i Prace Statystyczne”, 13/1968, Warsaw
6. Statistics Poland [1973]; Polskie tablice trwania życia 1970-72, (*Polish complete life expectancy tables 1970-1972*), (ed. J. Aleksyńska i Z. Gałązka), „Rocznik Demograficzny 1973”, Warsaw
7. Statistics Poland [1978]; Polskie tablice trwania życia 1975/1976, (*Polish complete life expectancy tables 1975/1976*), (ed. J. Mijakowska), Statystyka Polski, 101/1978, Warsaw
8. Statistics Poland [1983]; Polskie tablice trwania życia 1980/1981, (*Polish complete life expectancy tables 1980/1981*), (ed. L. Nowak), „Studia i Prace”, 4/1983, Warsaw
9. Statistics Poland [1987]; Polskie tablice trwania życia 1985/1986, (*Polish complete life expectancy tables 1985/1986*), (ed. L. Nowak), „Studia i Prace”, 14/1987, Warsaw
10. Statistics Poland [1993]; Polskie tablice trwania życia 1990-1991, (*Polish complete life expectancy tables 1990/1991*), (ed. J. Mijakowska), „Studia i Analizy Statystyczne”, Warsaw
11. Statistics Poland [1997]; Polskie tablice trwania życia 1995-1996, (*Polish complete life expectancy tables 1995/1996*), (ed. L. Bolesławski), „Studia i Analizy Statystyczne”, Warsaw

Life tables and mortality by causes

1. Statistics Poland [1975]; Trwanie życia i umieralność według przyczyn w latach 1970-1974, (*Life expectancy tables and mortality by causes in 1970-1974*), (ed. L. Bolesławski), Life tables, Warsaw
2. Statistics Poland [1976]; Trwanie życia i umieralność według przyczyn w 1975 r., (*Life expectancy tables and mortality by causes in 1975*), (ed. L. Bolesławski), Life tables, Warsaw
3. Statistics Poland [1976]; Trwanie życia i umieralność według przyczyn w województwach w latach 1973-1975, (*Life expectancy tables and mortality by causes and voivodships in 1973-1975*), (ed. L. Bolesławski), Life tables, Warsaw
4. Statistics Poland [1977]; Trwanie życia i umieralność według przyczyn w 1976 r., (*Life expectancy tables and mortality by causes in 1976*), (ed. J. Mijakowska), Life tables, Warsaw
5. Statistics Poland [1981]; Trwanie życia i umieralność według przyczyn w latach 1977-1980, (*Life expectancy tables and mortality by causes in 1977-1980*), (ed. J. Mijakowska), „Opracowania Statystyczne”, Warsaw
6. Statistics Poland [1981]; Trwanie życia i umieralność według przyczyn w latach 1976-1981, cz.I, (*Life expectancy tables and mortality by causes in 1976-1981*), (ed. L. Nowak), „Opracowania Statystyczne”, Warsaw
7. Statistics Poland [1982]; Trwanie życia i umieralność według przyczyn w województwach w latach 1976-1980, cz.II, (*Life expectancy tables and mortality by causes and voivodships in 1976-1980*), (ed. J. Mijakowska), „Opracowania Statystyczne”, Warsaw

8. Statistics Poland [1983]; Trwanie życia i umieralność według przyczyn w 1982 r., (*Life expectancy tables and mortality by causes in 1982*), (ed. L. Nowak), „Opracowania Statystyczne”, Warsaw
9. Statistics Poland [1984]; Trwanie życia i umieralność według przyczyn w 1983 r., (*Life expectancy tables and mortality by causes in 1983*), (ed. L. Nowak), „Opracowania Statystyczne”, Warsaw
10. Statistics Poland [1985]; Trwanie życia i umieralność według przyczyn w 1984 r., (*Life expectancy tables and mortality by causes in 1984*), (ed. L. Nowak), „Opracowania Statystyczne”, Warsaw
11. Statistics Poland [1986]; Trwanie życia i umieralność według przyczyn w 1985 r., (*Life expectancy tables and mortality by causes in 1985*), (ed. L. Nowak), „Opracowania Statystyczne”, Warsaw
12. Statistics Poland [1986]; Trwanie życia i umieralność według przyczyn w województwach w latach 1981-1985, (*Life expectancy tables and mortality by causes and voivodships in 1981-1985*), (ed. L. Nowak), „Opracowania Statystyczne”, Warsaw
13. Statistics Poland [1987]; Trwanie życia i umieralność według przyczyn w 1986 r., (*Life expectancy tables and mortality by causes in 1986*), (ed. L. Nowak), „Opracowania Statystyczne”, Warsaw
14. Statistics Poland [1988]; Trwanie życia i umieralność według przyczyn w 1987 r., (*Life expectancy tables and mortality by causes in 1987*), (ed. L. Nowak), „Opracowania Statystyczne”, Warsaw
15. Statistics Poland [1990]; Trwanie życia i umieralność według przyczyn w 1989 r., (*Life expectancy tables and mortality by causes in 1989*), (ed. L. Nowak), „Materiały i Opracowania Statystyczne”, Warsaw
16. Statistics Poland [1991]; Trwanie życia i umieralność według przyczyn w 1988 r., (*Life expectancy tables and mortality by causes in 1988*), (ed. L. Nowak), „Materiały i Opracowania Statystyczne”, Warsaw
17. Statistics Poland [1991]; Trwanie życia i umieralność według przyczyn w 1990 r., (*Life expectancy tables and mortality by causes in 1990*), (ed. L. Nowak), „Materiały i Opracowania Statystyczne”, Warsaw
18. Statistics Poland [1991]; Trwanie życia i umieralność według przyczyn w województwach w latach 1986-1990, (*Life expectancy tables and mortality by causes and voivodships in 1986-1990*), (ed. J. Mijakowska), „Materiały i Opracowania Statystyczne”, Warsaw
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21. Statistics Poland [1994]; Trwanie życia i umieralność według przyczyn w 1993 r., (*Life expectancy tables and mortality by causes in 1993*), (ed. A. Glazer, L. Bolesławski), „Informacje i Opracowania Statystyczne”, Warsaw
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Life tables

1. Bolesławski L. [1998]; Trwanie życia w 1997 r., (*Life expectancy tables of Poland 1997*), „Informacje i Opracowania Statystyczne”, Statistics Poland, Warsaw
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Healthy life years

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3. Trwanie życia w zdrowiu w 2021 r. [2022] (*Healthy Life Years in Poland in 2021*) News releases, Statistics Poland, Warsaw.

Chapter 8. Methodological notes

Life tables, also called mortality tables, illustrate both the average life expectancy and the potential schedule of population extinction. Life expectancy of a person at the age of x years is a prediction of future life expectancy. It informs how many years on average a person aged x completed would survive, if the currently observed mortality conditions were maintained for a sufficiently long time. The most frequently used and cited parameter is the newborn's life expectancy or shortly: life expectancy (denoted as e_0). It is used to study changes in mortality over time and is also one of the measures of the health status of the population. It is also used for national (e.g. intervoivodship) and international comparisons.

The following data is used to build complete life tables:

- the number of people who died in a given year by age,
- population by age group as of June 30 of a given year.

The basic coefficients needed to create the table are age specific death rates (m_x), which are calculated up to 99 years of age.

$$m_x = \frac{D_x}{E_x} \quad (1)$$

where:

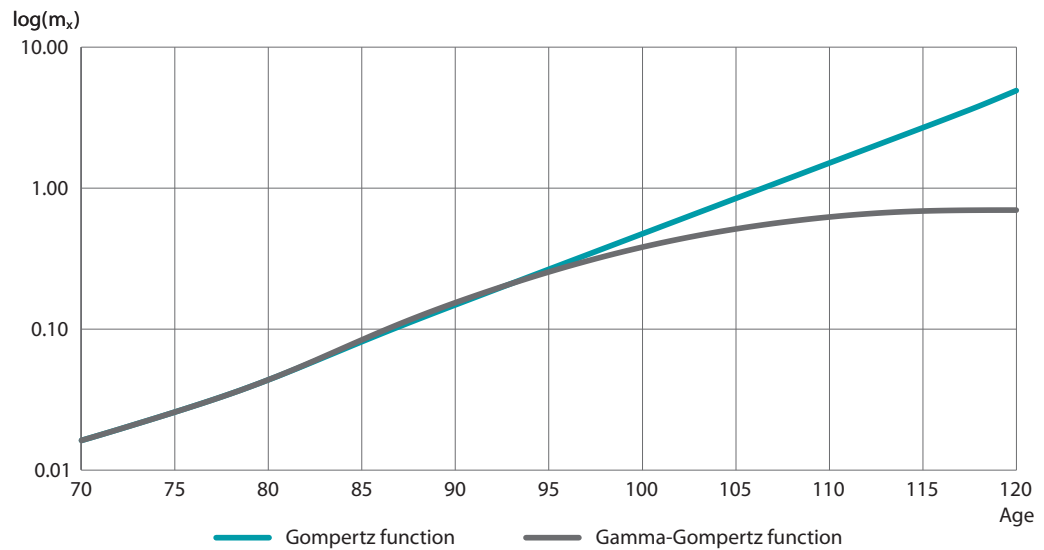
D_x – numer of deaths at age x ,

E_x – population on 30th June at age x .

Due to significant fluctuations in the value of death rates in the youngest and oldest ages, it is necessary to use modelling. This allows to eliminate accidental deviations of the coefficients from the long-term norm, caused by a small number of deaths in these ages. In case of the oldest years, strong fluctuations are also caused by very low population, resulting from the fact that relatively few survive to such an advanced age.

The Gamma-Gompertz model was used to smooth out death rates for the ages 85-99 and to extrapolate them over 100. The model was estimated on the basis of coefficients for ages from 70 to 99. This is due to the fact that above the age of 70, mortality acceleration rate increases dynamically.

The Gamma-Gompertz function is a modified version of the classical Gompertz model, which does not assume a constant, exponential increase in death rates. It projects a slowdown and ultimately a standstill of the increase in death rates (Chart 12). According to many demographers, this takes place in the oldest ages (Gampe, 2010, Vaupel, 2010, Rau et al., 2017, Barbi et al., 2018).

Chart 12. Example of the Gompertz and Gamma-Gompertz functions for the ages from 70 to 120 years

The applied function for the death rates is expressed by the formula (Lenart, 2012):

$$\hat{m}(x) = \frac{be^{b(x-M)}}{1+\Gamma e^{(-bM)}(e^{bx}-1)} \quad (2)$$

where:

b – parameter defining the rate of increase of mortality,

Γ – parameter defining the degree of slowdown of mortality in the oldest age groups,

M – the age at which the number of deaths is the highest (modal).

The model parameters (b, Γ, M) are estimated using the maximum likelihood³ method, assuming that the number of deaths in individual years is the result of a random process with a Poisson distribution. The Limited-Memory BFGS for Bound-constrained optimization algorithm (L-BFGS-B) (Byrd et al., 1994) was used to estimate the parameters, with the additional assumption that the maximum value that death rates can reach is 0.7 (Gampe, 2010).

The values of death rates over 85 years of age were replaced with model ones, while for younger age groups they remained the same as the empirical ones at this stage. Then, centered five-period moving averages were used to smooth the death rates. For the age of 2 years a three-period average was used, for the age 0 and 1 the empirical value was left unchanged. Before the smoothing, the coefficients were logarithmized. The described averaging formula was performed three times. For example, chart 13 shows the effect of the proposed modelling of death rates for women in 2023. The use of a moving average allowed to smooth out the m_x coefficients, especially for the youngest ages, where fluctuations are especially strong. In turn, the effect of applying the Gamma-Gompertz function is of particular importance for the smoothing of the values of the coefficients for the oldest ages, i.e. 95 years and more.

³ Maximum log-likelihood is calculated using the following formula:

$$l(\theta|D) \propto \sum_x D_x \log \theta - E_x \theta \quad \text{dla } x \in [70,99]$$

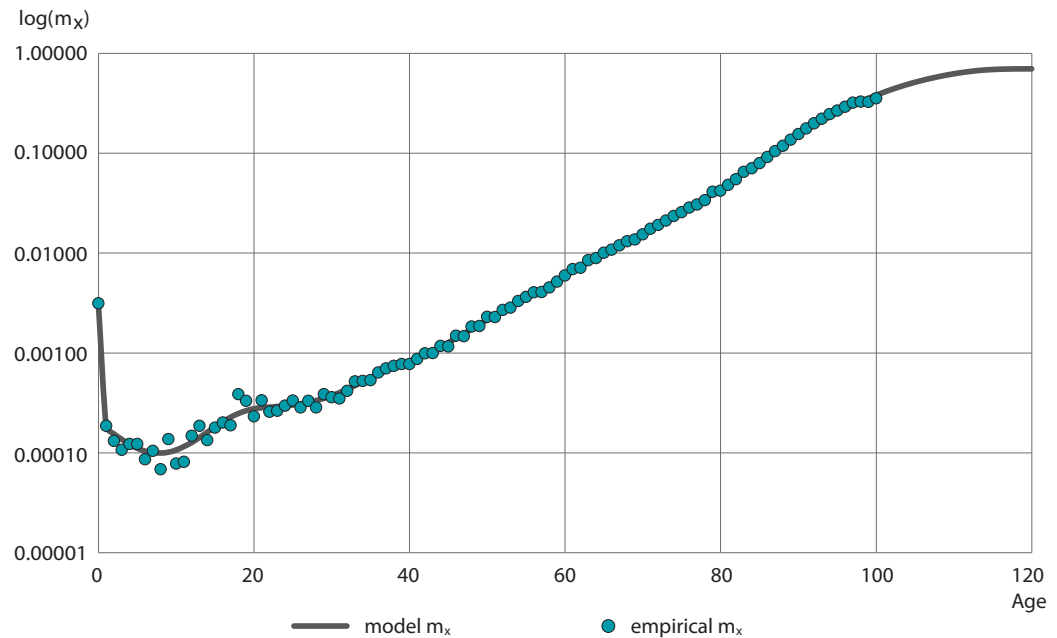
where:

\propto – mathematical symbol meaning „is proportional to“,

D_x – number of deaths at age x ,

E_x – population aged x ,

θ – model parameters.

Chart 13. Empirical and modeled death rates for women in Poland in 2023 (logarithmic scale)

In the next step, the probabilities of deaths for individual age groups (q_x) were calculated, using the following formula (Hinde, 1998):

$$q_x = \frac{\hat{m}_x}{1 + (1 - a_x)\hat{m}_x} \quad (3)$$

where:

a_x – the part of the year that deceased persons aged x years have lived, on average, since their last birthday. It is assumed that deaths for most ages are evenly distributed throughout the year, then the value of this parameter is 0.5. Exceptionally, for year 0 it is 0.1, because infants die much more often closer to birth than to the first birthday.

The remaining parameters are calculated according to the rules for creating life tables, using the following formulas:

l_x – number of people living up to the age of x completed years

$$\begin{aligned} l_x &= l_{x-1}(1 - q_{x-1}) \\ l_0 &= 100\,000 \end{aligned} \quad (4)$$

d_x – number of people who died during the year at the age of x completed years

$$d_x = l_x q_x \quad (5)$$

L_x – stationary population - average number of people living at the age of x years

$$L_x = \begin{cases} l_1 + 0,1d_0 & \text{for } x = 0 \\ \frac{l_x + l_{x+1}}{2} & \text{for } x > 0 \end{cases} \quad (6)$$

T_x – stationary cumulative population – the total number of years that remain to be lived – until the end of this generation – all people aged x

$$T_x = \sum_{i=x}^{120} L_i \quad (7)$$

e_x – average life expectancy of a person at the age of x completed years

$$e_x = \frac{T_x}{l_x} \quad (8)$$

The above formulas (4-8) are presented together with exemplary results in Table 11.

Table 11. Life table for males in 2023

age	Probability of dying	Number of survivors	Number of deceased	Stationary population	Cumulated stationary population	Life expectancy
x	q_x	l_x	d_x	L_x	T_x	e_x
0	0.00412	100000	413 $l_0 \times q_0$	99628 $l_1 + 0,1 \times d_0$	7464967 sum from L_0 to L_{120}	74.65 T_0/l_0
1	0.00024	99587 $l_0 \times (1 - q_0)$	24 $l_1 \times q_1$	99575 $(l_1 + l_2)/2$	7365339 sum from L_1 to L_{120}	73.96 T_1/l_1
2	0.00019	99563 $l_1 \times (1 - q_1)$	19 $l_2 \times q_2$	99554 $(l_2 + l_3)/2$	7265764 sum from L_2 to L_{120}	72.98 T_2/l_2
3	0.00015	99544 $l_2 \times (1 - q_2)$	15 $l_3 \times q_3$	99537 $(l_3 + l_4)/2$	7166210 sum from L_3 to L_{120}	71.99 T_3/l_3
...

Life table for both sexes combined

According to 26th article p. 3 of the Act of 17 December 1998 on pensions from the Social Insurance Fund (Journal of Laws of 2018, item 1270), life expectancy for the purposes of determining the amount of pension by ZUS (*The Social Insurance Institution*) is calculated for women and men jointly, which is equivalent to the calculation of life expectancy for people aged x years without taking into account their sex. This is intended to ensure the same pension for all people of the same age and with the same basis for calculating the pension.⁴

The joint life table is calculated for the sum of survivors (l_x) of both sexes assuming the ratio: 0.485 for female and 0.515 for male, which is based on the ratio of sexes at birth.

Data on life expectancy for both sexes in total, converted into months of life, are published annually in the form of an appendix to the announcement of the Statistics Poland President as well as Table E attached to this publication along with explanations to facilitate correct interpretation.

Life expectancy on lower territorial levels

To calculate life expectancy at the regional level, the methodology using TOPALS (de Beer, 2011) (tools for projecting age-specific rates using linear splines) was used. It enables life expectancy to be calculated for

⁴ Response of the Secretary of State at the Ministry of Labor and Social Policy to interpellation no. 3938 on gender discrimination in the new pension system

small areas where significant year-to-year fluctuations in death rates and zero death counts (in some ages, mostly younger ones) occur (Chart 13). To ensure comparability of results, the TOPALS model is used at all administrative levels. The starting point in TOPALS is the model distribution of the death rates calculated at the national level, the so-called $m_{x_standard}$. Differences between the empirical death rates at a given administrative level and the pattern are modeled. For their modeling spline regression is used:

$$\hat{m}_x = m_{x_standard} + B \times v, \quad (9)$$

where:

B – b-spline basis,

v – regression parameter vector.

In the Statistics Poland model, quadratic splines are used, which ensure greater accuracy of fit than linear ones. The knots (points between which the regression is estimated) were set on ages: 0, 1, 10, 20, 30, 45, 70, 85, 99. This selection aims to take into account the moments when significant changes in mortality occur. Due to strong fluctuations in the youngest and oldest years, it is also necessary to introduce the so-called penalization, which is implemented using the "penalty" (Eilers and Marx, 1996) calculated according to the appropriate formula. Its purpose is to reduce the differences between the regression parameters in particular intervals, leading to an inadequate shape of the curve. The penalty is calculated according to the following formula:

$$Kara = \lambda \sum_{i=1}^{n-1} (v_{i+1} - v_i)^2 \quad (10)$$

where:

λ – parameter on penalization (in Statistics Poland model $\lambda=5$),

n – number of knots (in Statistics Poland model $n=9$),

i – order of knot $i \in \{1, 2, \dots, 9\}$,

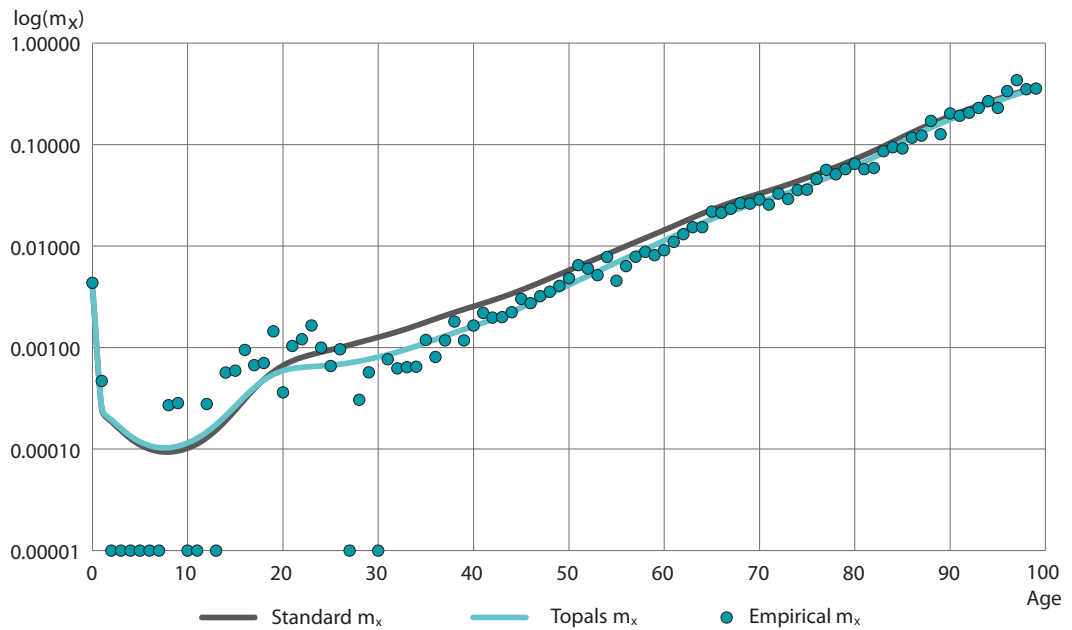
v_i – regression parameter in the interval $[i-1, i]$.

The penalty is subtracted from the value of the maximum likelihood function by which the model parameters are estimated.

Chart 14 shows the result of modelling death rates using the TOPALS technique for men from Cracow in 2023. This city is characterized by significantly lower mortality rates for men than Poland, what is particularly noticeable for the ages 30-70.

The technique used allowed to estimate a smooth distribution of m_x values, which additionally is similar in shape to the distribution at the national level. It is especially important for the youngest age groups, where the empirical data is very irregular.

Chart 14. Comparison of empirical death rates (empirical m_x) with the country standard (standard m_x) and the TOPALS-modeled coefficients (Topals m_x) for men from Cracow in 2023 (logarithmic scale)



m_x is equal to 0, i.e. no deaths are shown as 0.00001

Subsequently, the death rates over 85 years of age are replaced by those modelled using the Gamma-Gompertz function (in a similar way as it was done at the national level), what allows to extrapolate them over age 100. For age 75 and higher, the coefficients (after been logarithmized) were adjusted with a five-period, centered moving average. This ensures a smooth transition between the coefficients from the TOPALS model and those estimated using the Gamma-Gompertz function.

The mortality rates calculated in accordance with the presented procedure were used to calculate regional life tables, using the same formulas as at the national level.

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Basic tables

Table A. LIFE TABLE FOR POLAND 2023

Age x	Probability of dying q_x	Number of survivors l_x	Number deceased d_x	Stationary population		Life expectancy e_x
				At age x L_x	Cumulated T_x	
Total males						
0	0,00412	100 000	413	99 628	7 464 967	74,65
1	0,00024	99 587	24	99 575	7 365 339	73,96
2	0,00019	99 563	19	99 554	7 265 764	72,98
3	0,00015	99 544	15	99 537	7 166 210	71,99
4	0,00013	99 529	13	99 523	7 066 674	71,00
5	0,00011	99 516	10	99 511	6 967 151	70,01
6	0,00010	99 506	10	99 501	6 867 640	69,02
7	0,00009	99 496	10	99 491	6 768 139	68,02
8	0,00009	99 486	9	99 482	6 668 648	67,03
9	0,00010	99 477	10	99 472	6 569 167	66,04
10	0,00010	99 467	10	99 462	6 469 695	65,04
11	0,00011	99 457	11	99 452	6 370 233	64,05
12	0,00013	99 446	13	99 440	6 270 781	63,06
13	0,00015	99 433	15	99 426	6 171 342	62,07
14	0,00019	99 418	19	99 409	6 071 916	61,07
15	0,00024	99 399	24	99 387	5 972 508	60,09
16	0,00031	99 375	31	99 360	5 873 121	59,10
17	0,00039	99 344	39	99 325	5 773 761	58,12
18	0,00048	99 305	48	99 281	5 674 437	57,14
19	0,00058	99 257	57	99 229	5 575 156	56,17
20	0,00066	99 200	66	99 167	5 475 927	55,20
21	0,00074	99 134	73	99 098	5 376 760	54,24
22	0,00080	99 061	79	99 022	5 277 663	53,28
23	0,00085	98 982	84	98 940	5 178 641	52,32
24	0,00090	98 898	89	98 854	5 079 701	51,36
25	0,00095	98 809	94	98 762	4 980 848	50,41
26	0,00100	98 715	99	98 666	4 882 086	49,46
27	0,00106	98 616	104	98 564	4 783 420	48,51
28	0,00112	98 512	111	98 457	4 684 856	47,56
29	0,00119	98 401	117	98 343	4 586 400	46,61
30	0,00126	98 284	124	98 222	4 488 057	45,66
31	0,00134	98 160	132	98 094	4 389 835	44,72
32	0,00143	98 028	139	97 959	4 291 741	43,78
33	0,00153	97 889	150	97 814	4 193 783	42,84
34	0,00164	97 739	161	97 659	4 095 969	41,91
35	0,00177	97 578	173	97 492	3 998 310	40,98
36	0,00191	97 405	186	97 312	3 900 819	40,05

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
Total males (cont.)						
37	0,00206	97 219	201	97 119	3 803 507	39,12
38	0,00222	97 018	215	96 911	3 706 388	38,20
39	0,00238	96 803	230	96 688	3 609 478	37,29
40	0,00254	96 573	245	96 451	3 512 790	36,37
41	0,00272	96 328	262	96 197	3 416 339	35,47
42	0,00291	96 066	280	95 926	3 320 142	34,56
43	0,00313	95 786	300	95 636	3 224 216	33,66
44	0,00338	95 486	323	95 325	3 128 580	32,76
45	0,00367	95 163	350	94 988	3 033 256	31,87
46	0,00400	94 813	379	94 624	2 938 268	30,99
47	0,00437	94 434	413	94 228	2 843 644	30,11
48	0,00479	94 021	450	93 796	2 749 417	29,24
49	0,00525	93 571	491	93 326	2 655 621	28,38
50	0,00575	93 080	535	92 813	2 562 295	27,53
51	0,00629	92 545	582	92 254	2 469 483	26,68
52	0,00689	91 963	634	91 646	2 377 229	25,85
53	0,00755	91 329	689	90 985	2 285 583	25,03
54	0,00828	90 640	751	90 265	2 194 598	24,21
55	0,00907	89 889	815	89 482	2 104 334	23,41
56	0,00993	89 074	885	88 632	2 014 852	22,62
57	0,01087	88 189	959	87 710	1 926 221	21,84
58	0,01190	87 230	1 038	86 711	1 838 511	21,08
59	0,01302	86 192	1 122	85 631	1 751 800	20,32
60	0,01426	85 070	1 213	84 464	1 666 169	19,59
61	0,01564	83 857	1 312	83 201	1 581 706	18,86
62	0,01717	82 545	1 417	81 837	1 498 505	18,15
63	0,01886	81 128	1 530	80 363	1 416 668	17,46
64	0,02066	79 598	1 644	78 776	1 336 305	16,79
65	0,02254	77 954	1 757	77 076	1 257 529	16,13
66	0,02446	76 197	1 864	75 265	1 180 454	15,49
67	0,02640	74 333	1 962	73 352	1 105 189	14,87
68	0,02832	72 371	2 050	71 346	1 031 837	14,26
69	0,03029	70 321	2 130	69 256	960 491	13,66
70	0,03234	68 191	2 205	67 089	891 235	13,07
71	0,03454	65 986	2 279	64 847	824 146	12,49
72	0,03693	63 707	2 353	62 531	759 300	11,92
73	0,03961	61 354	2 430	60 139	696 769	11,36

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age x	Probability of dying q_x	Number of survivors l_x	Number deceased d_x	Stationary population		Life expectancy e_x
				At age x L_x	Cumulated T_x	
Total males (cont.)						
74	0,04260	58 924	2 510	57 669	636 630	10,80
75	0,04593	56 414	2 591	55 119	578 961	10,26
76	0,04962	53 823	2 671	52 488	523 843	9,73
77	0,05375	51 152	2 749	49 778	471 355	9,21
78	0,05831	48 403	2 822	46 992	421 578	8,71
79	0,06339	45 581	2 890	44 136	374 586	8,22
80	0,06914	42 691	2 952	41 215	330 450	7,74
81	0,07571	39 739	3 008	38 235	289 235	7,28
82	0,08318	36 731	3 056	35 203	251 000	6,83
83	0,09176	33 675	3 090	32 130	215 797	6,41
84	0,10141	30 585	3 101	29 035	183 667	6,01
85	0,11203	27 484	3 079	25 945	154 632	5,63
86	0,12345	24 405	3 013	22 899	128 688	5,27
87	0,13550	21 392	2 899	19 943	105 789	4,95
88	0,14792	18 493	2 735	17 126	85 847	4,64
89	0,16071	15 758	2 533	14 492	68 721	4,36
90	0,17387	13 225	2 299	12 076	54 230	4,10
91	0,18744	10 926	2 048	9 902	42 154	3,86
92	0,20148	8 878	1 789	7 984	32 252	3,63
93	0,21602	7 089	1 532	6 323	24 269	3,42
94	0,23100	5 557	1 283	4 916	17 946	3,23
95	0,24637	4 274	1 053	3 748	13 030	3,05
96	0,26204	3 221	844	2 799	9 283	2,88
97	0,27794	2 377	661	2 047	6 484	2,73
98	0,29398	1 716	505	1 464	4 437	2,59
99	0,31007	1 211	375	1 024	2 974	2,46
100	0,32612	836	273	700	1 950	2,33

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
Total females						
0	0,00314	100 000	315	99 717	8 199 313	81,99
1	0,00019	99 685	18	99 676	8 099 597	81,25
2	0,00016	99 667	16	99 659	7 999 921	80,27
3	0,00014	99 651	13	99 645	7 900 262	79,28
4	0,00012	99 638	12	99 632	7 800 617	78,29
5	0,00011	99 626	12	99 620	7 700 985	77,30
6	0,00010	99 614	10	99 609	7 601 365	76,31
7	0,00010	99 604	10	99 599	7 501 756	75,32
8	0,00010	99 594	10	99 589	7 402 157	74,32
9	0,00010	99 584	10	99 579	7 302 568	73,33
10	0,00011	99 574	11	99 569	7 202 989	72,34
11	0,00012	99 563	11	99 558	7 103 421	71,35
12	0,00013	99 552	13	99 546	7 003 863	70,35
13	0,00014	99 539	14	99 532	6 904 318	69,36
14	0,00016	99 525	16	99 517	6 804 786	68,37
15	0,00018	99 509	18	99 500	6 705 269	67,38
16	0,00020	99 491	21	99 481	6 605 769	66,40
17	0,00023	99 470	22	99 459	6 506 288	65,41
18	0,00025	99 448	25	99 436	6 406 829	64,42
19	0,00026	99 423	26	99 410	6 307 394	63,44
20	0,00028	99 397	28	99 383	6 207 984	62,46
21	0,00028	99 369	28	99 355	6 108 601	61,47
22	0,00029	99 341	29	99 327	6 009 246	60,49
23	0,00029	99 312	29	99 298	5 909 919	59,51
24	0,00030	99 283	29	99 269	5 810 622	58,53
25	0,00030	99 254	30	99 239	5 711 353	57,54
26	0,00031	99 224	31	99 209	5 612 114	56,56
27	0,00032	99 193	31	99 178	5 512 906	55,58
28	0,00033	99 162	34	99 145	5 413 728	54,59
29	0,00035	99 128	34	99 111	5 314 583	53,61
30	0,00037	99 094	38	99 075	5 215 472	52,63
31	0,00040	99 056	39	99 037	5 116 397	51,65
32	0,00043	99 017	43	98 996	5 017 361	50,67
33	0,00047	98 974	47	98 951	4 918 365	49,69
34	0,00052	98 927	51	98 902	4 819 415	48,72
35	0,00057	98 876	56	98 848	4 720 513	47,74
36	0,00061	98 820	61	98 790	4 621 665	46,77

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q _x	l _x	d _x	L _x	T _x	e _x
Total females (cont.)						
37	0,00067	98 759	66	98 726	4 522 876	45,80
38	0,00072	98 693	71	98 658	4 424 150	44,83
39	0,00077	98 622	76	98 584	4 325 492	43,86
40	0,00083	98 546	81	98 506	4 226 908	42,89
41	0,00089	98 465	88	98 421	4 128 403	41,93
42	0,00097	98 377	95	98 330	4 029 982	40,96
43	0,00105	98 282	103	98 231	3 931 652	40,00
44	0,00115	98 179	114	98 122	3 833 422	39,05
45	0,00127	98 065	124	98 003	3 735 300	38,09
46	0,00141	97 941	138	97 872	3 637 297	37,14
47	0,00156	97 803	153	97 727	3 539 425	36,19
48	0,00174	97 650	169	97 566	3 441 698	35,25
49	0,00193	97 481	189	97 387	3 344 133	34,31
50	0,00215	97 292	208	97 188	3 246 746	33,37
51	0,00238	97 084	231	96 969	3 149 558	32,44
52	0,00264	96 853	256	96 725	3 052 590	31,52
53	0,00291	96 597	281	96 457	2 955 865	30,60
54	0,00321	96 316	309	96 162	2 859 408	29,69
55	0,00354	96 007	340	95 837	2 763 247	28,78
56	0,00390	95 667	373	95 481	2 667 410	27,88
57	0,00430	95 294	409	95 090	2 571 929	26,99
58	0,00476	94 885	452	94 659	2 476 840	26,10
59	0,00528	94 433	498	94 184	2 382 181	25,23
60	0,00588	93 935	552	93 659	2 287 997	24,36
61	0,00655	93 383	612	93 077	2 194 338	23,50
62	0,00728	92 771	675	92 434	2 101 261	22,65
63	0,00808	92 096	744	91 724	2 008 827	21,81
64	0,00892	91 352	815	90 945	1 917 103	20,99
65	0,00981	90 537	888	90 093	1 826 159	20,17
66	0,01076	89 649	964	89 167	1 736 066	19,37
67	0,01178	88 685	1 045	88 163	1 646 899	18,57
68	0,01291	87 640	1 131	87 075	1 558 736	17,79
69	0,01417	86 509	1 226	85 896	1 471 662	17,01
70	0,01557	85 283	1 328	84 619	1 385 766	16,25
71	0,01715	83 955	1 439	83 236	1 301 147	15,50
72	0,01891	82 516	1 561	81 736	1 217 911	14,76
73	0,02087	80 955	1 689	80 111	1 136 176	14,03

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
Total females (cont.)						
74	0,02303	79 266	1 825	78 354	1 056 065	13,32
75	0,02541	77 441	1 968	76 457	977 712	12,63
76	0,02807	75 473	2 118	74 414	901 255	11,94
77	0,03109	73 355	2 281	72 215	826 841	11,27
78	0,03451	71 074	2 452	69 848	754 626	10,62
79	0,03846	68 622	2 639	67 303	684 778	9,98
80	0,04309	65 983	2 844	64 561	617 476	9,36
81	0,04853	63 139	3 064	61 607	552 915	8,76
82	0,05486	60 075	3 295	58 428	491 308	8,18
83	0,06231	56 780	3 538	55 011	432 880	7,62
84	0,07089	53 242	3 775	51 355	377 869	7,10
85	0,08058	49 467	3 986	47 474	326 515	6,60
86	0,09130	45 481	4 153	43 405	279 041	6,14
87	0,10303	41 328	4 258	39 199	235 636	5,70
88	0,11554	37 070	4 283	34 929	196 437	5,30
89	0,12884	32 787	4 224	30 675	161 509	4,93
90	0,14294	28 563	4 083	26 522	130 834	4,58
91	0,15788	24 480	3 865	22 548	104 312	4,26
92	0,17364	20 615	3 580	18 825	81 765	3,97
93	0,19025	17 035	3 241	15 415	62 940	3,69
94	0,20761	13 794	2 864	12 362	47 525	3,45
95	0,22563	10 930	2 466	9 697	35 163	3,22
96	0,24417	8 464	2 067	7 431	25 466	3,01
97	0,26308	6 397	1 683	5 556	18 036	2,82
98	0,28220	4 714	1 330	4 049	12 480	2,65
99	0,30138	3 384	1 020	2 874	8 431	2,49
100	0,32044	2 364	758	1 985	5 557	2,35

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
Males in urban areas						
0	0,00402	100 000	402	99 638	7 495 212	74,95
1	0,00021	99 598	21	99 588	7 395 574	74,25
2	0,00018	99 577	18	99 568	7 295 987	73,27
3	0,00015	99 559	15	99 552	7 196 419	72,28
4	0,00013	99 544	13	99 538	7 096 867	71,29
5	0,00011	99 531	11	99 526	6 997 330	70,30
6	0,00010	99 520	10	99 515	6 897 804	69,31
7	0,00009	99 510	9	99 506	6 798 289	68,32
8	0,00009	99 501	9	99 497	6 698 784	67,32
9	0,00009	99 492	10	99 487	6 599 287	66,33
10	0,00010	99 482	9	99 478	6 499 800	65,34
11	0,00010	99 473	10	99 468	6 400 323	64,34
12	0,00012	99 463	12	99 457	6 300 855	63,35
13	0,00014	99 451	14	99 444	6 201 398	62,36
14	0,00018	99 437	18	99 428	6 101 954	61,37
15	0,00023	99 419	22	99 408	6 002 526	60,38
16	0,00030	99 397	31	99 382	5 903 118	59,39
17	0,00040	99 366	39	99 347	5 803 736	58,41
18	0,00050	99 327	49	99 303	5 704 390	57,43
19	0,00060	99 278	60	99 248	5 605 087	56,46
20	0,00069	99 218	68	99 184	5 505 839	55,49
21	0,00076	99 150	75	99 113	5 406 655	54,53
22	0,00081	99 075	81	99 035	5 307 543	53,57
23	0,00086	98 994	85	98 952	5 208 508	52,61
24	0,00089	98 909	88	98 865	5 109 557	51,66
25	0,00093	98 821	92	98 775	5 010 692	50,70
26	0,00097	98 729	96	98 681	4 911 917	49,75
27	0,00101	98 633	100	98 583	4 813 236	48,80
28	0,00106	98 533	105	98 481	4 714 653	47,85
29	0,00112	98 428	110	98 373	4 616 172	46,90
30	0,00118	98 318	115	98 261	4 517 799	45,95
31	0,00124	98 203	122	98 142	4 419 539	45,00
32	0,00132	98 081	130	98 016	4 321 397	44,06
33	0,00141	97 951	138	97 882	4 223 381	43,12
34	0,00153	97 813	150	97 738	4 125 499	42,18
35	0,00166	97 663	162	97 582	4 027 761	41,24
36	0,00180	97 501	175	97 414	3 930 179	40,31

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q _x	l _x	d _x	L _x	T _x	e _x
Males in urban areas (cont.)						
37	0,00196	97 326	191	97 231	3 832 765	39,38
38	0,00212	97 135	205	97 033	3 735 535	38,46
39	0,00228	96 930	221	96 820	3 638 502	37,54
40	0,00245	96 709	237	96 591	3 541 683	36,62
41	0,00263	96 472	254	96 345	3 445 092	35,71
42	0,00283	96 218	273	96 082	3 348 747	34,80
43	0,00306	95 945	294	95 798	3 252 666	33,90
44	0,00332	95 651	317	95 493	3 156 868	33,00
45	0,00362	95 334	345	95 162	3 061 375	32,11
46	0,00395	94 989	376	94 801	2 966 214	31,23
47	0,00434	94 613	410	94 408	2 871 413	30,35
48	0,00476	94 203	449	93 979	2 777 005	29,48
49	0,00522	93 754	489	93 510	2 683 026	28,62
50	0,00572	93 265	534	92 998	2 589 517	27,77
51	0,00627	92 731	581	92 441	2 496 519	26,92
52	0,00686	92 150	632	91 834	2 404 078	26,09
53	0,00750	91 518	687	91 175	2 312 244	25,27
54	0,00822	90 831	747	90 458	2 221 070	24,45
55	0,00900	90 084	810	89 679	2 130 612	23,65
56	0,00983	89 274	878	88 835	2 040 933	22,86
57	0,01075	88 396	950	87 921	1 952 098	22,08
58	0,01175	87 446	1 028	86 932	1 864 177	21,32
59	0,01283	86 418	1 109	85 864	1 777 245	20,57
60	0,01404	85 309	1 198	84 710	1 691 382	19,83
61	0,01540	84 111	1 295	83 464	1 606 672	19,10
62	0,01690	82 816	1 400	82 116	1 523 208	18,39
63	0,01855	81 416	1 511	80 661	1 441 092	17,70
64	0,02031	79 905	1 622	79 094	1 360 432	17,03
65	0,02212	78 283	1 732	77 417	1 281 338	16,37
66	0,02396	76 551	1 835	75 634	1 203 921	15,73
67	0,02580	74 716	1 928	73 752	1 128 287	15,10
68	0,02762	72 788	2 010	71 783	1 054 535	14,49
69	0,02947	70 778	2 086	69 735	982 752	13,88
70	0,03142	68 692	2 158	67 613	913 017	13,29
71	0,03353	66 534	2 231	65 419	845 404	12,71
72	0,03585	64 303	2 305	63 151	779 986	12,13
73	0,03847	61 998	2 385	60 806	716 835	11,56

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q _x	l _x	d _x	L _x	T _x	e _x
Males in urban areas (cont.)						
74	0,04139	59 613	2 468	58 379	656 030	11,00
75	0,04465	57 145	2 551	55 870	597 651	10,46
76	0,04823	54 594	2 633	53 278	541 781	9,92
77	0,05220	51 961	2 713	50 605	488 504	9,40
78	0,05655	49 248	2 785	47 856	437 899	8,89
79	0,06141	46 463	2 853	45 037	390 044	8,39
80	0,06689	43 610	2 917	42 152	345 007	7,91
81	0,07319	40 693	2 979	39 204	302 856	7,44
82	0,08039	37 714	3 032	36 198	263 652	6,99
83	0,08871	34 682	3 076	33 144	227 454	6,56
84	0,09806	31 606	3 100	30 056	194 310	6,15
85	0,10838	28 506	3 089	26 962	164 254	5,76
86	0,11949	25 417	3 037	23 899	137 293	5,40
87	0,13121	22 380	2 937	20 912	113 394	5,07
88	0,14331	19 443	2 786	18 050	92 483	4,76
89	0,15579	16 657	2 595	15 360	74 433	4,47
90	0,16868	14 062	2 372	12 876	59 073	4,20
91	0,18200	11 690	2 128	10 626	46 197	3,95
92	0,19581	9 562	1 872	8 626	35 571	3,72
93	0,21015	7 690	1 616	6 882	26 945	3,50
94	0,22497	6 074	1 367	5 391	20 063	3,30
95	0,24020	4 707	1 131	4 142	14 673	3,12
96	0,25578	3 576	915	3 119	10 531	2,94
97	0,27163	2 661	723	2 300	7 413	2,79
98	0,28767	1 938	557	1 660	5 113	2,64
99	0,30381	1 381	420	1 171	3 454	2,50
100	0,31996	961	308	807	2 283	2,38

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q _x	l _x	d _x	L _x	T _x	e _x
Females in urban areas						
0	0,00300	100 000	301	99 729	8 193 901	81,94
1	0,00017	99 699	16	99 691	8 094 172	81,19
2	0,00015	99 683	16	99 675	7 994 481	80,20
3	0,00014	99 667	14	99 660	7 894 806	79,21
4	0,00013	99 653	12	99 647	7 795 146	78,22
5	0,00012	99 641	12	99 635	7 695 499	77,23
6	0,00011	99 629	11	99 624	7 595 864	76,24
7	0,00010	99 618	11	99 613	7 496 240	75,25
8	0,00010	99 607	10	99 602	7 396 628	74,26
9	0,00010	99 597	10	99 592	7 297 026	73,27
10	0,00011	99 587	11	99 582	7 197 434	72,27
11	0,00012	99 576	11	99 571	7 097 852	71,28
12	0,00013	99 565	13	99 559	6 998 282	70,29
13	0,00014	99 552	14	99 545	6 898 723	69,30
14	0,00016	99 538	16	99 530	6 799 178	68,31
15	0,00019	99 522	19	99 513	6 699 648	67,32
16	0,00022	99 503	22	99 492	6 600 136	66,33
17	0,00025	99 481	25	99 469	6 500 644	65,35
18	0,00028	99 456	28	99 442	6 401 175	64,36
19	0,00031	99 428	31	99 413	6 301 733	63,38
20	0,00033	99 397	33	99 381	6 202 321	62,40
21	0,00034	99 364	34	99 347	6 102 940	61,42
22	0,00034	99 330	33	99 314	6 003 593	60,44
23	0,00034	99 297	34	99 280	5 904 280	59,46
24	0,00033	99 263	33	99 247	5 805 000	58,48
25	0,00033	99 230	32	99 214	5 705 753	57,50
26	0,00032	99 198	32	99 182	5 606 539	56,52
27	0,00033	99 166	33	99 150	5 507 357	55,54
28	0,00033	99 133	32	99 117	5 408 208	54,56
29	0,00035	99 101	35	99 084	5 309 091	53,57
30	0,00037	99 066	36	99 048	5 210 007	52,59
31	0,00040	99 030	40	99 010	5 110 959	51,61
32	0,00044	98 990	44	98 968	5 011 949	50,63
33	0,00049	98 946	48	98 922	4 912 981	49,65
34	0,00054	98 898	54	98 871	4 814 059	48,68
35	0,00060	98 844	59	98 815	4 715 188	47,70
36	0,00065	98 785	64	98 753	4 616 374	46,73

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q _x	l _x	d _x	L _x	T _x	e _x
Females in urban areas (cont.)						
37	0,00071	98 721	70	98 686	4 517 621	45,76
38	0,00077	98 651	76	98 613	4 418 935	44,79
39	0,00083	98 575	81	98 535	4 320 322	43,83
40	0,00089	98 494	88	98 450	4 221 787	42,86
41	0,00096	98 406	94	98 359	4 123 337	41,90
42	0,00104	98 312	103	98 261	4 024 978	40,94
43	0,00113	98 209	110	98 154	3 926 718	39,98
44	0,00123	98 099	121	98 039	3 828 564	39,03
45	0,00136	97 978	133	97 912	3 730 525	38,08
46	0,00150	97 845	147	97 772	3 632 614	37,13
47	0,00167	97 698	163	97 617	3 534 842	36,18
48	0,00186	97 535	181	97 445	3 437 226	35,24
49	0,00207	97 354	201	97 254	3 339 781	34,31
50	0,00229	97 153	223	97 042	3 242 528	33,38
51	0,00254	96 930	246	96 807	3 145 486	32,45
52	0,00279	96 684	270	96 549	3 048 679	31,53
53	0,00307	96 414	296	96 266	2 952 130	30,62
54	0,00337	96 118	324	95 956	2 855 864	29,71
55	0,00370	95 794	354	95 617	2 759 908	28,81
56	0,00406	95 440	388	95 246	2 664 291	27,92
57	0,00447	95 052	424	94 840	2 569 045	27,03
58	0,00494	94 628	468	94 394	2 474 205	26,15
59	0,00547	94 160	515	93 903	2 379 811	25,27
60	0,00607	93 645	569	93 361	2 285 909	24,41
61	0,00675	93 076	628	92 762	2 192 548	23,56
62	0,00748	92 448	691	92 103	2 099 786	22,71
63	0,00826	91 757	759	91 378	2 007 684	21,88
64	0,00909	90 998	827	90 585	1 916 306	21,06
65	0,00998	90 171	900	89 721	1 825 722	20,25
66	0,01092	89 271	975	88 784	1 736 001	19,45
67	0,01195	88 296	1 055	87 769	1 647 217	18,66
68	0,01307	87 241	1 141	86 671	1 559 449	17,88
69	0,01433	86 100	1 233	85 484	1 472 778	17,11
70	0,01572	84 867	1 335	84 200	1 387 295	16,35
71	0,01727	83 532	1 443	82 811	1 303 095	15,60
72	0,01900	82 089	1 560	81 309	1 220 285	14,87
73	0,02092	80 529	1 685	79 687	1 138 976	14,14

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
Females in urban areas (cont.)						
74	0,02305	78 844	1 817	77 936	1 059 289	13,44
75	0,02541	77 027	1 957	76 049	981 354	12,74
76	0,02807	75 070	2 107	74 017	905 305	12,06
77	0,03107	72 963	2 267	71 830	831 289	11,39
78	0,03445	70 696	2 436	69 478	759 459	10,74
79	0,03832	68 260	2 616	66 952	689 981	10,11
80	0,04279	65 644	2 809	64 240	623 029	9,49
81	0,04797	62 835	3 014	61 328	558 790	8,89
82	0,05398	59 821	3 229	58 207	497 462	8,32
83	0,06107	56 592	3 456	54 864	439 255	7,76
84	0,06925	53 136	3 680	51 296	384 391	7,23
85	0,07852	49 456	3 883	47 515	333 095	6,74
86	0,08886	45 573	4 050	43 548	285 581	6,27
87	0,10019	41 523	4 160	39 443	242 033	5,83
88	0,11226	37 363	4 194	35 266	202 590	5,42
89	0,12511	33 169	4 150	31 094	167 324	5,04
90	0,13874	29 019	4 026	27 006	136 230	4,69
91	0,15316	24 993	3 828	23 079	109 224	4,37
92	0,16839	21 165	3 564	19 383	86 145	4,07
93	0,18448	17 601	3 247	15 978	66 762	3,79
94	0,20135	14 354	2 890	12 909	50 784	3,54
95	0,21890	11 464	2 510	10 209	37 875	3,30
96	0,23702	8 954	2 122	7 893	27 666	3,09
97	0,25559	6 832	1 747	5 959	19 773	2,89
98	0,27445	5 085	1 395	4 388	13 815	2,72
99	0,29345	3 690	1 083	3 149	9 427	2,55
100	0,31243	2 607	815	2 200	6 279	2,41

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
Males in rural areas						
0	0,00427	100 000	428	99 615	7 418 059	74,18
1	0,00029	99 572	28	99 558	7 318 444	73,50
2	0,00019	99 544	20	99 534	7 218 886	72,52
3	0,00015	99 524	15	99 517	7 119 352	71,53
4	0,00012	99 509	11	99 504	7 019 836	70,54
5	0,00010	99 498	11	99 493	6 920 332	69,55
6	0,00009	99 487	9	99 483	6 820 840	68,56
7	0,00009	99 478	9	99 474	6 721 357	67,57
8	0,00009	99 469	9	99 465	6 621 884	66,57
9	0,00010	99 460	10	99 455	6 522 419	65,58
10	0,00011	99 450	11	99 445	6 422 964	64,58
11	0,00012	99 439	11	99 434	6 323 520	63,59
12	0,00014	99 428	14	99 421	6 224 086	62,60
13	0,00017	99 414	17	99 406	6 124 665	61,61
14	0,00020	99 397	20	99 387	6 025 260	60,62
15	0,00025	99 377	24	99 365	5 925 873	59,63
16	0,00031	99 353	31	99 338	5 826 508	58,64
17	0,00038	99 322	38	99 303	5 727 170	57,66
18	0,00046	99 284	45	99 262	5 627 867	56,68
19	0,00055	99 239	55	99 212	5 528 606	55,71
20	0,00063	99 184	63	99 153	5 429 394	54,74
21	0,00071	99 121	70	99 086	5 330 242	53,78
22	0,00078	99 051	77	99 013	5 231 156	52,81
23	0,00084	98 974	84	98 932	5 132 143	51,85
24	0,00090	98 890	89	98 846	5 033 211	50,90
25	0,00097	98 801	96	98 753	4 934 366	49,94
26	0,00104	98 705	103	98 654	4 835 613	48,99
27	0,00112	98 602	110	98 547	4 736 959	48,04
28	0,00120	98 492	118	98 433	4 638 412	47,09
29	0,00129	98 374	127	98 311	4 539 979	46,15
30	0,00138	98 247	136	98 179	4 441 669	45,21
31	0,00148	98 111	145	98 039	4 343 490	44,27
32	0,00158	97 966	155	97 889	4 245 451	43,34
33	0,00170	97 811	166	97 728	4 147 563	42,40
34	0,00182	97 645	177	97 557	4 049 835	41,48
35	0,00195	97 468	190	97 373	3 952 278	40,55
36	0,00208	97 278	202	97 177	3 854 905	39,63

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
Males in rural areas (cont.)						
37	0,00222	97 076	215	96 969	3 757 728	38,71
38	0,00236	96 861	229	96 747	3 660 760	37,79
39	0,00251	96 632	243	96 511	3 564 013	36,88
40	0,00267	96 389	257	96 261	3 467 503	35,97
41	0,00284	96 132	273	95 996	3 371 242	35,07
42	0,00303	95 859	290	95 714	3 275 247	34,17
43	0,00324	95 569	309	95 415	3 179 533	33,27
44	0,00347	95 260	331	95 095	3 084 118	32,38
45	0,00375	94 929	356	94 751	2 989 024	31,49
46	0,00407	94 573	385	94 381	2 894 273	30,60
47	0,00443	94 188	417	93 980	2 799 892	29,73
48	0,00483	93 771	453	93 545	2 705 913	28,86
49	0,00528	93 318	492	93 072	2 612 368	27,99
50	0,00577	92 826	536	92 558	2 519 296	27,14
51	0,00632	92 290	583	91 999	2 426 738	26,29
52	0,00692	91 707	635	91 390	2 334 740	25,46
53	0,00760	91 072	692	90 726	2 243 350	24,63
54	0,00834	90 380	754	90 003	2 152 624	23,82
55	0,00915	89 626	820	89 216	2 062 621	23,01
56	0,01005	88 806	892	88 360	1 973 405	22,22
57	0,01103	87 914	969	87 430	1 885 045	21,44
58	0,01209	86 945	1 051	86 420	1 797 616	20,68
59	0,01325	85 894	1 138	85 325	1 711 196	19,92
60	0,01454	84 756	1 233	84 140	1 625 871	19,18
61	0,01596	83 523	1 333	82 857	1 541 732	18,46
62	0,01754	82 190	1 441	81 470	1 458 875	17,75
63	0,01928	80 749	1 557	79 971	1 377 406	17,06
64	0,02116	79 192	1 675	78 355	1 297 435	16,38
65	0,02315	77 517	1 795	76 620	1 219 081	15,73
66	0,02522	75 722	1 910	74 767	1 142 461	15,09
67	0,02733	73 812	2 017	72 804	1 067 694	14,47
68	0,02946	71 795	2 115	70 738	994 891	13,86
69	0,03164	69 680	2 205	68 578	924 153	13,26
70	0,03389	67 475	2 287	66 332	855 576	12,68
71	0,03626	65 188	2 364	64 006	789 244	12,11
72	0,03883	62 824	2 439	61 605	725 238	11,54
73	0,04165	60 385	2 515	59 128	663 634	10,99

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
Males in rural areas (cont.)						
74	0,04478	57 870	2 592	56 574	604 506	10,45
75	0,04829	55 278	2 669	53 944	547 932	9,91
76	0,05223	52 609	2 748	51 235	493 989	9,39
77	0,05667	49 861	2 825	48 449	442 754	8,88
78	0,06162	47 036	2 898	45 587	394 305	8,38
79	0,06715	44 138	2 964	42 656	348 718	7,90
80	0,07338	41 174	3 022	39 663	306 062	7,43
81	0,08045	38 152	3 069	36 618	266 399	6,98
82	0,08842	35 083	3 102	33 532	229 782	6,55
83	0,09750	31 981	3 118	30 422	196 250	6,14
84	0,10772	28 863	3 109	27 309	165 828	5,75
85	0,11897	25 754	3 064	24 222	138 519	5,38
86	0,13104	22 690	2 973	21 204	114 297	5,04
87	0,14378	19 717	2 835	18 300	93 094	4,72
88	0,15688	16 882	2 649	15 558	74 794	4,43
89	0,17029	14 233	2 424	13 021	59 237	4,16
90	0,18402	11 809	2 173	10 723	46 216	3,91
91	0,19811	9 636	1 909	8 682	35 493	3,68
92	0,21260	7 727	1 643	6 906	26 812	3,47
93	0,22754	6 084	1 384	5 392	19 906	3,27
94	0,24286	4 700	1 142	4 129	14 514	3,09
95	0,25848	3 558	920	3 098	10 385	2,92
96	0,27433	2 638	724	2 276	7 287	2,76
97	0,29032	1 914	556	1 636	5 011	2,62
98	0,30635	1 358	416	1 150	3 375	2,49
99	0,32234	942	304	790	2 225	2,36
100	0,33819	638	216	530	1 435	2,25

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
Females in rural areas						
0	0,00334	100 000	334	99 699	8 207 216	82,07
1	0,00021	99 666	21	99 656	8 107 517	81,35
2	0,00015	99 645	15	99 638	8 007 862	80,36
3	0,00012	99 630	13	99 624	7 908 224	79,38
4	0,00010	99 617	10	99 612	7 808 601	78,39
5	0,00010	99 607	10	99 602	7 708 989	77,39
6	0,00009	99 597	9	99 593	7 609 387	76,40
7	0,00009	99 588	9	99 584	7 509 794	75,41
8	0,00009	99 579	9	99 575	7 410 211	74,42
9	0,00010	99 570	10	99 565	7 310 636	73,42
10	0,00010	99 560	11	99 555	7 211 071	72,43
11	0,00011	99 549	11	99 544	7 111 517	71,44
12	0,00012	99 538	12	99 532	7 011 973	70,45
13	0,00014	99 526	14	99 519	6 912 441	69,45
14	0,00015	99 512	16	99 504	6 812 922	68,46
15	0,00017	99 496	16	99 488	6 713 418	67,47
16	0,00018	99 480	19	99 471	6 613 930	66,49
17	0,00019	99 461	19	99 452	6 514 460	65,50
18	0,00020	99 442	20	99 432	6 415 008	64,51
19	0,00021	99 422	21	99 412	6 315 576	63,52
20	0,00021	99 401	20	99 391	6 216 165	62,54
21	0,00021	99 381	22	99 370	6 116 774	61,55
22	0,00022	99 359	21	99 349	6 017 404	60,56
23	0,00023	99 338	23	99 327	5 918 055	59,57
24	0,00024	99 315	24	99 303	5 818 729	58,59
25	0,00026	99 291	26	99 278	5 719 426	57,60
26	0,00028	99 265	28	99 251	5 620 148	56,62
27	0,00031	99 237	30	99 222	5 520 897	55,63
28	0,00033	99 207	33	99 191	5 421 675	54,65
29	0,00035	99 174	35	99 157	5 322 484	53,67
30	0,00037	99 139	37	99 121	5 223 328	52,69
31	0,00039	99 102	38	99 083	5 124 207	51,71
32	0,00042	99 064	42	99 043	5 025 124	50,73
33	0,00044	99 022	43	99 001	4 926 081	49,75
34	0,00047	98 979	47	98 956	4 827 081	48,77
35	0,00051	98 932	50	98 907	4 728 125	47,79
36	0,00055	98 882	55	98 855	4 629 218	46,82

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
Females in rural areas (cont.)						
37	0,00059	98 827	59	98 798	4 530 364	45,84
38	0,00064	98 768	62	98 737	4 431 566	44,87
39	0,00068	98 706	68	98 672	4 332 829	43,90
40	0,00073	98 638	71	98 603	4 234 157	42,93
41	0,00078	98 567	77	98 529	4 135 555	41,96
42	0,00085	98 490	83	98 449	4 037 026	40,99
43	0,00093	98 407	92	98 361	3 938 578	40,02
44	0,00103	98 315	100	98 265	3 840 217	39,06
45	0,00113	98 215	112	98 159	3 741 952	38,10
46	0,00126	98 103	123	98 042	3 643 793	37,14
47	0,00140	97 980	137	97 912	3 545 751	36,19
48	0,00155	97 843	152	97 767	3 447 840	35,24
49	0,00172	97 691	168	97 607	3 350 073	34,29
50	0,00192	97 523	187	97 430	3 252 466	33,35
51	0,00214	97 336	209	97 232	3 155 036	32,41
52	0,00239	97 127	232	97 011	3 057 805	31,48
53	0,00267	96 895	259	96 766	2 960 794	30,56
54	0,00298	96 636	288	96 492	2 864 028	29,64
55	0,00330	96 348	318	96 189	2 767 536	28,72
56	0,00366	96 030	351	95 855	2 671 347	27,82
57	0,00404	95 679	387	95 486	2 575 493	26,92
58	0,00448	95 292	427	95 079	2 480 007	26,03
59	0,00499	94 865	474	94 628	2 384 929	25,14
60	0,00557	94 391	526	94 128	2 290 301	24,26
61	0,00623	93 865	585	93 573	2 196 173	23,40
62	0,00696	93 280	649	92 956	2 102 600	22,54
63	0,00776	92 631	719	92 272	2 009 645	21,70
64	0,00860	91 912	791	91 517	1 917 373	20,86
65	0,00950	91 121	865	90 689	1 825 857	20,04
66	0,01045	90 256	943	89 785	1 735 168	19,22
67	0,01146	89 313	1 023	88 802	1 645 384	18,42
68	0,01257	88 290	1 110	87 735	1 556 582	17,63
69	0,01383	87 180	1 206	86 577	1 468 847	16,85
70	0,01526	85 974	1 312	85 318	1 382 270	16,08
71	0,01688	84 662	1 428	83 948	1 296 952	15,32
72	0,01870	83 234	1 557	82 456	1 213 004	14,57
73	0,02074	81 677	1 695	80 830	1 130 549	13,84

Table A. LIFE TABLE FOR POLAND 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
Females in rural areas (cont.)						
74	0,02298	79 982	1 837	79 064	1 049 719	13,12
75	0,02539	78 145	1 985	77 153	970 656	12,42
76	0,02806	76 160	2 137	75 092	893 503	11,73
77	0,03110	74 023	2 302	72 872	818 412	11,06
78	0,03459	71 721	2 481	70 481	745 540	10,39
79	0,03868	69 240	2 678	67 901	675 059	9,75
80	0,04362	66 562	2 904	65 110	607 158	9,12
81	0,04955	63 658	3 154	62 081	542 048	8,52
82	0,05648	60 504	3 417	58 796	479 967	7,93
83	0,06462	57 087	3 689	55 243	421 172	7,38
84	0,07398	53 398	3 951	51 423	365 929	6,85
85	0,08446	49 447	4 176	47 359	314 507	6,36
86	0,09592	45 271	4 343	43 100	267 148	5,90
87	0,10844	40 928	4 438	38 709	224 048	5,47
88	0,12179	36 490	4 444	34 268	185 339	5,08
89	0,13596	32 046	4 357	29 868	151 071	4,71
90	0,15099	27 689	4 181	25 599	121 204	4,38
91	0,16693	23 508	3 924	21 546	95 605	4,07
92	0,18368	19 584	3 598	17 785	74 059	3,78
93	0,20125	15 986	3 217	14 378	56 274	3,52
94	0,21953	12 769	2 803	11 368	41 897	3,28
95	0,23838	9 966	2 376	8 778	30 529	3,06
96	0,25764	7 590	1 956	6 612	21 751	2,87
97	0,27713	5 634	1 561	4 854	15 139	2,69
98	0,29668	4 073	1 209	3 469	10 286	2,53
99	0,31610	2 864	905	2 412	6 817	2,38
100	0,33522	1 959	657	1 631	4 406	2,25

Table B. LIFE EXPECTANCY IN POLAND BY VOIVODSHIPS IN 2023

	Males					Females				
	by age									
	0	15	30	45	60	0	15	30	45	60
Total	74,65	60,09	45,66	31,87	19,59	81,99	67,38	52,63	38,09	24,36
02 Dolnośląskie	74,31	59,80	45,38	31,56	19,40	81,82	67,18	52,47	37,94	24,29
04 Kujawsko-pomorskie	74,10	59,58	45,20	31,47	19,25	81,29	66,81	52,07	37,52	23,91
06 Lubelskie	74,33	59,68	45,30	31,66	19,50	82,65	68,01	53,27	38,74	24,89
08 Lubuskie	74,07	59,39	45,01	31,23	18,97	81,53	66,80	52,06	37,58	24,02
10 Łódzkie	73,17	58,61	44,22	30,74	18,85	81,24	66,62	51,93	37,47	23,84
12 Małopolskie	76,19	61,55	47,01	32,98	20,37	83,11	68,42	53,60	38,98	25,09
14 Mazowieckie	74,83	60,25	45,89	32,11	19,85	82,16	67,51	52,78	38,23	24,47
16 Opolskie	75,27	60,62	46,10	32,16	19,56	82,26	67,58	52,77	38,15	24,33
18 Podkarpackie	76,10	61,55	47,03	33,10	20,59	83,56	69,01	54,19	39,54	25,53
20 Podlaskie	74,83	60,40	46,08	32,48	20,22	83,37	68,80	54,08	39,51	25,62
22 Pomorskie	75,18	60,76	46,40	32,45	19,97	82,02	67,41	52,62	38,06	24,39
24 Śląskie	74,29	59,71	45,25	31,43	19,24	81,12	66,55	51,82	37,32	23,71
26 Świętokrzyskie	73,93	59,31	44,88	31,24	19,31	82,39	67,77	53,02	38,51	24,74
28 Warmińsko-mazurskie	73,99	59,39	45,07	31,41	19,17	81,67	67,18	52,48	37,95	24,28
30 Wielkopolskie	74,75	60,22	45,84	31,95	19,49	81,67	67,04	52,28	37,74	24,05
32 Zachodniopomorskie	74,09	59,43	45,10	31,37	19,25	81,43	66,93	52,21	37,67	24,07
Urban areas	74,95	60,38	45,95	32,11	19,83	81,94	67,32	52,59	38,08	24,41
02 Dolnośląskie	74,38	59,87	45,46	31,63	19,56	81,93	67,29	52,55	38,02	24,40
04 Kujawsko-pomorskie	74,14	59,63	45,25	31,49	19,35	81,33	66,91	52,17	37,63	24,02
06 Lubelskie	75,10	60,50	46,10	32,44	20,17	82,80	68,15	53,44	38,93	25,11
08 Lubuskie	74,42	59,69	45,34	31,61	19,39	81,72	67,01	52,29	37,84	24,28
10 Łódzkie	73,32	58,75	44,40	30,92	18,98	81,05	66,40	51,72	37,31	23,77
12 Małopolskie	76,47	61,89	47,39	33,34	20,70	82,89	68,15	53,36	38,79	25,03
14 Mazowieckie	75,62	61,02	46,63	32,76	20,34	82,19	67,55	52,83	38,29	24,57
16 Opolskie	75,55	60,78	46,18	32,22	19,73	82,39	67,69	52,89	38,30	24,56
18 Podkarpackie	77,01	62,37	47,85	33,89	21,15	83,55	69,07	54,29	39,69	25,75
20 Podlaskie	75,83	61,36	46,95	33,20	20,80	83,51	69,00	54,31	39,77	25,92
22 Pomorskie	75,78	61,32	46,89	32,87	20,33	82,39	67,72	52,93	38,42	24,78
24 Śląskie	74,11	59,53	45,07	31,26	19,16	81,01	66,41	51,69	37,21	23,67
26 Świętokrzyskie	74,74	60,14	45,67	31,95	19,84	82,24	67,61	52,91	38,48	24,82
28 Warmińsko-mazurskie	74,78	60,17	45,80	32,10	19,78	81,80	67,35	52,67	38,20	24,54
30 Wielkopolskie	75,12	60,63	46,20	32,25	19,77	81,80	67,17	52,43	37,91	24,24
32 Zachodniopomorskie	74,27	59,60	45,24	31,49	19,43	81,50	67,06	52,39	37,88	24,27

Table B. LIFE EXPECTANCY IN POLAND BY VOIVODSHIPS IN 2023 (cont.)

	Males					Females				
	by age									
	0	15	30	45	60	0	15	30	45	60
Rural areas	74,18	59,63	45,21	31,49	19,18	82,07	67,47	52,69	38,10	24,26
02 Dolnośląskie	74,00	59,48	45,06	31,25	18,90	81,48	66,87	52,18	37,66	23,96
04 Kujawsko-pomorskie	73,98	59,44	45,08	31,36	19,04	81,16	66,60	51,85	37,31	23,68
06 Lubelskie	73,69	59,01	44,64	31,01	18,92	82,52	67,90	53,14	38,56	24,68
08 Lubuskie	73,32	58,76	44,30	30,47	18,12	81,03	66,32	51,54	37,00	23,43
10 Łódzkie	72,91	58,36	43,96	30,45	18,61	81,63	67,06	52,34	37,80	24,02
12 Małopolskie	75,88	61,19	46,62	32,61	20,02	83,32	68,67	53,83	39,16	25,15
14 Mazowieckie	73,50	58,95	44,64	31,03	19,01	82,07	67,40	52,66	38,09	24,25
16 Opolskie	74,92	60,40	45,96	32,04	19,35	82,07	67,42	52,61	37,97	24,05
18 Podkarpackie	75,47	60,97	46,45	32,54	20,16	83,56	68,95	54,11	39,43	25,37
20 Podlaskie	73,47	59,09	44,90	31,50	19,44	83,23	68,56	53,79	39,16	25,21
22 Pomorskie	74,07	59,71	45,41	31,60	19,18	81,06	66,53	51,74	37,13	23,36
24 Śląskie	74,87	60,25	45,79	31,94	19,49	81,52	67,03	52,27	37,71	23,89
26 Świętokrzyskie	73,26	58,64	44,25	30,66	18,84	82,53	67,93	53,14	38,56	24,68
28 Warmińsko-mazurskie	72,85	58,30	44,02	30,39	18,23	81,37	66,82	52,07	37,49	23,77
30 Wielkopolskie	74,28	59,71	45,36	31,54	19,11	81,44	66,80	52,02	37,45	23,73
32 Zachodniopomorskie	73,57	58,97	44,65	30,96	18,69	81,08	66,44	51,64	37,07	23,46

Table C. LIFE EXPECTANCY IN POLAND BY SUBREGIONS IN 2023

	Males					Females				
	by age									
	0	15	30	45	60	0	15	30	45	60
1 Jeleniogórski	73,13	58,92	44,58	30,90	18,88	81,58	66,93	52,19	37,68	24,03
2 Legnicko-Głogowski	74,24	59,87	45,60	31,88	19,64	81,58	67,07	52,39	37,92	24,30
3 Wałbrzyski	72,91	58,32	43,93	30,33	18,49	80,57	66,03	51,33	36,90	23,54
4 Wrocławski	75,00	60,44	45,99	32,06	19,63	82,37	67,78	53,05	38,47	24,60
5 Wrocław, City	76,13	61,46	46,90	32,88	20,56	82,89	68,15	53,37	38,79	25,06
6 Bydgosko-Toruński	75,25	60,68	46,25	32,36	19,88	82,09	67,60	52,88	38,29	24,56
7 Grudziądzki	73,61	59,27	44,87	31,07	18,90	81,21	66,71	51,91	37,34	23,69
8 Włocławski	72,66	58,01	43,72	30,34	18,67	80,49	66,00	51,35	37,00	23,64
9 Bialski	73,80	59,14	44,64	31,02	18,92	82,20	67,62	52,87	38,36	24,55
10 Chełmsko-Zamojski	74,09	59,39	45,08	31,46	19,30	82,39	67,87	53,14	38,59	24,74
11 Lubelski	74,91	60,23	45,80	32,10	19,85	82,87	68,17	53,41	38,84	24,99
12 Puławski	74,09	59,62	45,34	31,69	19,58	82,89	68,21	53,49	38,95	25,08
13 Gorzowski	73,55	58,84	44,54	30,88	18,65	81,14	66,41	51,65	37,19	23,69
14 Zielonogórski	74,37	59,75	45,30	31,45	19,18	81,75	67,06	52,33	37,82	24,22
15 Łódzki	73,30	58,59	44,20	30,70	18,76	81,11	66,70	52,06	37,63	24,05
16 Łódź, City	73,32	58,91	44,58	30,96	18,93	80,80	66,10	51,37	36,94	23,43
17 Piotrkowski	72,87	58,39	44,01	30,67	18,86	81,34	66,84	52,15	37,69	24,07
18 Sieradzki	73,23	58,55	44,23	30,73	18,87	81,74	67,04	52,30	37,80	24,05
19 Skierniewicki	73,04	58,48	44,09	30,52	18,64	81,63	66,99	52,25	37,71	23,94
20 Krakowski	76,25	61,58	46,98	32,95	20,39	83,27	68,58	53,78	39,16	25,17
21 Kraków, City	77,11	62,58	48,06	33,88	21,03	82,88	68,17	53,38	38,79	25,04
22 Nowosądecki	75,87	61,20	46,67	32,68	20,05	82,95	68,23	53,40	38,77	24,90
23 Oświęcimski	74,87	60,26	45,77	31,94	19,58	82,44	67,72	52,91	38,31	24,54
24 Tarnowski	76,56	61,79	47,26	33,22	20,50	83,90	69,15	54,32	39,66	25,64
25 Ciechanowski	71,80	57,36	43,19	29,96	18,43	81,02	66,38	51,61	37,11	23,56
26 Ostrołęcki	73,52	58,86	44,52	30,95	19,03	82,51	67,86	53,06	38,46	24,53
27 Radomski	73,46	59,01	44,69	31,14	19,30	81,87	67,27	52,49	37,95	24,21
28 Warszawa, City	76,69	62,14	47,75	33,69	21,02	82,72	68,00	53,26	38,69	24,93
29 Warszawski East	74,67	60,00	45,55	31,68	19,31	82,34	67,74	52,97	38,35	24,48
30 Warszawski West	75,81	61,20	46,75	32,85	20,24	82,01	67,33	52,58	38,00	24,19
31 Nyski	74,03	59,35	44,81	31,00	18,75	81,52	66,91	52,14	37,59	23,95
32 Opolski	76,07	61,43	46,94	32,92	20,12	82,70	67,99	53,16	38,51	24,58
33 Krośnieński	76,13	61,62	47,13	33,23	20,67	83,36	68,90	54,10	39,49	25,54
34 Przemyski	75,61	61,15	46,62	32,67	20,22	83,26	68,57	53,74	39,06	24,99
35 Rzeszowski	76,59	62,01	47,43	33,38	20,70	83,46	68,92	54,17	39,53	25,54
36 Tarnobrzesci	75,88	61,23	46,78	33,00	20,64	84,09	69,42	54,57	39,90	25,87
37 Białostocki	75,71	61,22	46,90	33,12	20,69	83,70	69,16	54,48	39,87	25,84
38 Łomżyński	74,05	59,68	45,37	31,96	19,90	83,10	68,55	53,78	39,23	25,43

Table C. LIFE EXPECTANCY IN POLAND BY SUBREGIONS IN 2023 (cont.)

	Males					Females				
	by age									
	0	15	30	45	60	0	15	30	45	60
39 Suwalski	74,38	59,95	45,64	32,07	19,82	83,13	68,46	53,70	39,17	25,38
40 Gdański	75,32	60,91	46,55	32,60	19,96	81,87	67,23	52,44	37,87	24,11
41 Słupski	73,88	59,35	45,11	31,45	19,31	81,59	67,18	52,49	38,06	24,48
42 Starogardzki	73,51	59,20	44,86	31,02	18,77	81,00	66,36	51,58	37,05	23,55
43 Trójmiejski	76,98	62,53	48,06	34,00	21,21	82,98	68,27	53,46	38,86	25,09
44 Bielski	75,34	60,74	46,21	32,17	19,69	81,32	67,00	52,29	37,78	24,09
45 Bytomski	73,44	58,92	44,55	30,82	18,83	80,40	65,84	51,14	36,66	23,13
46 Częstochowski	73,63	58,99	44,61	30,98	19,00	81,53	66,88	52,12	37,59	23,89
47 Gliwicki	75,03	60,23	45,67	31,86	19,66	81,69	67,27	52,56	38,04	24,40
48 Katowicki	73,61	59,06	44,58	30,79	18,69	80,25	65,63	50,95	36,50	23,06
49 Rybnicki	75,04	60,54	46,06	32,16	19,72	81,51	66,94	52,17	37,60	23,87
50 Sosnowiecki	73,53	58,91	44,49	30,85	18,89	80,71	66,05	51,34	36,97	23,56
51 Tyski	75,02	60,58	46,15	32,20	19,82	82,24	67,44	52,60	37,95	24,11
52 Kielecki	73,84	59,32	44,93	31,33	19,39	82,40	67,76	53,01	38,53	24,86
53 Sandomiersko-Jędrzejowski	74,05	59,31	44,83	31,12	19,17	82,40	67,81	53,06	38,48	24,56
54 Elbląski	74,51	59,86	45,40	31,56	19,23	81,30	66,75	52,06	37,61	24,05
55 Ełcki	72,89	58,49	44,31	30,86	18,83	81,69	67,21	52,49	37,97	24,30
56 Olsztyński	74,07	59,47	45,18	31,53	19,29	81,99	67,53	52,79	38,23	24,46
57 Kaliski	73,80	59,38	45,08	31,45	19,23	81,60	66,97	52,23	37,69	23,98
58 Koniński	74,03	59,55	45,18	31,40	19,23	81,57	66,94	52,15	37,65	23,98
59 Leszczyński	74,93	60,26	45,83	31,87	19,27	81,45	66,75	51,95	37,39	23,71
60 Piłski	73,60	59,20	44,95	31,22	18,88	80,96	66,46	51,81	37,34	23,80
61 Poznański	75,69	61,09	46,68	32,68	19,96	81,71	67,05	52,28	37,69	23,92
62 Poznań, City	76,39	61,82	47,19	33,06	20,36	82,36	67,77	52,99	38,43	24,73
63 Koszaliński	74,33	59,63	45,21	31,48	19,29	81,46	67,02	52,31	37,80	24,24
64 Szczecinecko-Pyrzycki	73,62	58,93	44,54	30,84	18,69	81,15	66,54	51,84	37,36	23,83
65 Szczecin, City	74,28	59,83	45,45	31,60	19,57	81,13	66,66	51,94	37,44	23,90
66 Szczeciński	74,07	59,42	45,15	31,51	19,37	81,91	67,37	52,62	38,06	24,31
67 Inowrocławski	74,06	59,49	45,07	31,32	19,04	80,66	66,21	51,46	36,95	23,39
68 Świecki	73,46	59,07	44,80	31,14	18,95	80,82	66,17	51,40	36,86	23,16
69 Nowotarski	76,12	61,46	46,98	33,03	20,54	83,45	68,91	54,11	39,44	25,35
70 Płocki	73,50	58,84	44,43	30,80	18,86	80,84	66,33	51,73	37,34	23,79
71 Siedlecki	74,17	59,48	45,12	31,61	19,52	81,95	67,49	52,85	38,39	24,65
72 Chojnicki	74,14	59,64	45,16	31,26	19,02	81,10	66,57	51,84	37,29	23,57
73 Żyrardowski	72,57	58,33	44,22	30,98	19,13	81,30	66,67	51,94	37,41	23,72

Table D. LIFE TABLE FOR BOTH SEXES COMBINED FOR POLAND IN 2023

Age x	Probability of dying q_x	Number of survivors l_x	Number deceased d_x	Stationary population		Life expectancy e_x
				At age x L_x	Cumulated T_x	
0	0,00365	100 000	365	99 672	7 821 123	78,21
1	0,00022	99 635	22	99 624	7 721 452	77,50
2	0,00017	99 613	17	99 605	7 621 828	76,51
3	0,00014	99 596	14	99 589	7 522 223	75,53
4	0,00013	99 582	13	99 576	7 422 634	74,54
5	0,00011	99 569	11	99 564	7 323 059	73,55
6	0,00010	99 558	10	99 553	7 223 495	72,56
7	0,00010	99 548	10	99 543	7 123 942	71,56
8	0,00009	99 538	9	99 534	7 024 399	70,57
9	0,00010	99 529	10	99 524	6 924 866	69,58
10	0,00011	99 519	11	99 514	6 825 342	68,58
11	0,00011	99 508	11	99 503	6 725 828	67,59
12	0,00013	99 497	13	99 491	6 626 326	66,60
13	0,00014	99 484	14	99 477	6 526 835	65,61
14	0,00018	99 470	18	99 461	6 427 358	64,62
15	0,00021	99 452	21	99 442	6 327 897	63,63
16	0,00026	99 431	26	99 418	6 228 456	62,64
17	0,00031	99 405	31	99 390	6 129 038	61,66
18	0,00036	99 374	36	99 356	6 029 648	60,68
19	0,00042	99 338	42	99 317	5 930 292	59,70
20	0,00048	99 296	48	99 272	5 830 975	58,72
21	0,00051	99 248	51	99 223	5 731 703	57,75
22	0,00055	99 197	55	99 170	5 632 481	56,78
23	0,00057	99 142	57	99 114	5 533 311	55,81
24	0,00061	99 085	60	99 055	5 434 198	54,84
25	0,00064	99 025	63	98 994	5 335 143	53,88
26	0,00067	98 962	66	98 929	5 236 149	52,91
27	0,00070	98 896	69	98 862	5 137 220	51,95
28	0,00074	98 827	73	98 791	5 038 359	50,98
29	0,00078	98 754	77	98 716	4 939 568	50,02
30	0,00083	98 677	82	98 636	4 840 853	49,06
31	0,00088	98 595	87	98 552	4 742 217	48,10
32	0,00094	98 508	93	98 462	4 643 665	47,14
33	0,00102	98 415	100	98 365	4 545 204	46,18
34	0,00109	98 315	107	98 262	4 446 839	45,23
35	0,00119	98 208	117	98 150	4 348 577	44,28
36	0,00127	98 091	125	98 029	4 250 428	43,33
37	0,00139	97 966	136	97 898	4 152 399	42,39

Table D. LIFE TABLE FOR BOTH SEXES COMBINED FOR POLAND IN 2023 (cont.)

Age x	Probability of dying q_x	Number of survivors l_x	Number deceased d_x	Stationary population		Life expectancy e_x
				At age x L_x	Cumulated T_x	
38	0,00148	97 830	145	97 758	4 054 501	41,44
39	0,00159	97 685	155	97 608	3 956 744	40,51
40	0,00170	97 530	166	97 447	3 859 136	39,57
41	0,00182	97 364	177	97 276	3 761 689	38,64
42	0,00195	97 187	190	97 092	3 664 414	37,70
43	0,00211	96 997	205	96 895	3 567 322	36,78
44	0,00229	96 792	222	96 681	3 470 427	35,85
45	0,00249	96 570	240	96 450	3 373 746	34,94
46	0,00272	96 330	262	96 199	3 277 296	34,02
47	0,00299	96 068	287	95 925	3 181 097	33,11
48	0,00328	95 781	314	95 624	3 085 173	32,21
49	0,00360	95 467	344	95 295	2 989 549	31,31
50	0,00396	95 123	377	94 935	2 894 254	30,43
51	0,00434	94 746	411	94 541	2 799 319	29,55
52	0,00478	94 335	451	94 110	2 704 779	28,67
53	0,00523	93 884	491	93 639	2 610 669	27,81
54	0,00575	93 393	537	93 125	2 517 031	26,95
55	0,00629	92 856	584	92 564	2 423 906	26,10
56	0,00690	92 272	637	91 954	2 331 342	25,27
57	0,00755	91 635	692	91 289	2 239 389	24,44
58	0,00829	90 943	754	90 566	2 148 100	23,62
59	0,00908	90 189	819	89 780	2 057 534	22,81
60	0,00999	89 370	893	88 924	1 967 754	22,02
61	0,01099	88 477	972	87 991	1 878 831	21,24
62	0,01209	87 505	1 058	86 976	1 790 840	20,47
63	0,01328	86 447	1 148	85 873	1 703 864	19,71
64	0,01456	85 299	1 242	84 678	1 617 991	18,97
65	0,01589	84 057	1 336	83 389	1 533 313	18,24
66	0,01725	82 721	1 427	82 008	1 449 924	17,53
67	0,01867	81 294	1 518	80 535	1 367 916	16,83
68	0,02011	79 776	1 604	78 974	1 287 381	16,14
69	0,02163	78 172	1 691	77 327	1 208 407	15,46
70	0,02327	76 481	1 780	75 591	1 131 081	14,79
71	0,02506	74 701	1 872	73 765	1 055 490	14,13
72	0,02704	72 829	1 969	71 845	981 725	13,48
73	0,02921	70 860	2 070	69 825	909 880	12,84
74	0,03166	68 790	2 178	67 701	840 055	12,21
75	0,03436	66 612	2 289	65 468	772 354	11,59

Table D. LIFE TABLE FOR BOTH SEXES COMBINED FOR POLAND IN 2023 (cont.)

Age	Probability of dying	Number of survivors	Number deceased	Stationary population		Life expectancy
				At age x	Cumulated	
x	q_x	l_x	d_x	L_x	T_x	e_x
76	0,03736	64 323	2 403	63 122	706 887	10,99
77	0,04073	61 920	2 522	60 659	643 765	10,40
78	0,04448	59 398	2 642	58 077	583 106	9,82
79	0,04877	56 756	2 768	55 372	525 029	9,25
80	0,05372	53 988	2 900	52 538	469 657	8,70
81	0,05941	51 088	3 035	49 571	417 119	8,16
82	0,06601	48 053	3 172	46 467	367 549	7,65
83	0,07368	44 881	3 307	43 228	321 082	7,15
84	0,08246	41 574	3 428	39 860	277 854	6,68
85	0,09225	38 146	3 519	36 387	237 994	6,24
86	0,10298	34 627	3 566	32 844	201 608	5,82
87	0,11455	31 061	3 558	29 282	168 764	5,43
88	0,12675	27 503	3 486	25 760	139 482	5,07
89	0,13961	24 017	3 353	22 341	113 722	4,74
90	0,15312	20 664	3 164	19 082	91 381	4,42
91	0,16743	17 500	2 930	16 035	72 299	4,13
92	0,18236	14 570	2 657	13 242	56 264	3,86
93	0,19819	11 913	2 361	10 733	43 023	3,61
94	0,21461	9 552	2 050	8 527	32 290	3,38
95	0,23167	7 502	1 738	6 633	23 763	3,17
96	0,24931	5 764	1 437	5 046	17 130	2,97
97	0,26739	4 327	1 157	3 749	12 085	2,79
98	0,28549	3 170	905	2 718	8 336	2,63
99	0,30375	2 265	688	1 921	5 619	2,48
100	0,32213	1 577	508	1 323	3 698	2,34

Table E. LIFE EXPECTANCY FOR BOTH SEXES COMBINED IN 2023
(Expected months of future life by age)

Age in completed years	Months above full year of age											
	0	1	2	3	4	5	6	7	8	9	10	11
30	588,7	587,8	586,8	585,8	584,9	583,9	583,0	582,0	581,0	580,1	579,1	578,2
31	577,2	576,2	575,3	574,3	573,4	572,4	571,4	570,5	569,5	568,6	567,6	566,6
32	565,7	564,7	563,8	562,8	561,8	560,9	559,9	559,0	558,0	557,0	556,1	555,1
33	554,2	553,2	552,3	551,3	550,4	549,4	548,5	547,5	546,6	545,6	544,7	543,7
34	542,8	541,8	540,9	539,9	539,0	538,0	537,1	536,1	535,2	534,2	533,3	532,3
35	531,4	530,4	529,5	528,5	527,6	526,6	525,7	524,7	523,8	522,8	521,9	520,9
36	520,0	519,0	518,1	517,1	516,2	515,3	514,3	513,4	512,4	511,5	510,6	509,6
37	508,7	507,7	506,8	505,8	504,9	503,9	503,0	502,0	501,1	500,1	499,2	498,2
38	497,3	496,4	495,4	494,5	493,6	492,6	491,7	490,8	489,8	488,9	488,0	487,1
39	486,1	485,2	484,2	483,3	482,4	481,4	480,5	479,5	478,6	477,7	476,7	475,8
40	474,8	473,9	473,0	472,1	471,1	470,2	469,3	468,3	467,4	466,5	465,5	464,6
41	463,7	462,7	461,8	460,9	459,9	459,0	458,0	457,1	456,2	455,2	454,3	453,3
42	452,4	451,5	450,6	449,6	448,7	447,8	446,9	446,0	445,0	444,1	443,2	442,3
43	441,4	440,4	439,5	438,6	437,6	436,7	435,8	434,9	433,9	433,0	432,1	431,1
44	430,2	429,3	428,4	427,5	426,6	425,7	424,7	423,8	422,9	422,0	421,1	420,2
45	419,3	418,4	417,4	416,5	415,6	414,7	413,8	412,8	411,9	411,0	410,1	409,2
46	408,2	407,3	406,4	405,5	404,6	403,7	402,8	401,9	401,0	400,1	399,1	398,2
47	397,3	396,4	395,5	394,6	393,7	392,8	391,9	391,0	390,1	389,2	388,3	387,4
48	386,5	385,6	384,7	383,8	382,9	382,0	381,1	380,2	379,3	378,4	377,5	376,6
49	375,7	374,8	374,0	373,1	372,2	371,3	370,4	369,6	368,7	367,8	366,9	366,0
50	365,2	364,3	363,4	362,5	361,6	360,8	359,9	359,0	358,1	357,2	356,4	355,5
51	354,6	353,7	352,8	352,0	351,1	350,2	349,3	348,4	347,6	346,7	345,8	344,9
52	344,0	343,2	342,3	341,5	340,6	339,7	338,9	338,0	337,2	336,3	335,4	334,6
53	333,7	332,9	332,0	331,1	330,3	329,4	328,6	327,7	326,8	326,0	325,1	324,3
54	323,4	322,6	321,7	320,9	320,0	319,2	318,3	317,5	316,6	315,8	314,9	314,1
55	313,2	312,4	311,5	310,7	309,9	309,1	308,2	307,4	306,6	305,7	304,9	304,1
56	303,2	302,4	301,6	300,8	299,9	299,1	298,3	297,4	296,6	295,8	294,9	294,1
57	293,3	292,5	291,6	290,8	290,0	289,2	288,4	287,5	286,7	285,9	285,1	284,3
58	283,4	282,6	281,8	281,0	280,2	279,4	278,6	277,8	277,0	276,2	275,3	274,5
59	273,7	272,9	272,1	271,4	270,6	269,8	269,0	268,2	267,4	266,6	265,8	265,0
60	264,2	263,5	262,7	261,9	261,1	260,3	259,6	258,8	258,0	257,2	256,4	255,7
61	254,9	254,1	253,3	252,6	251,8	251,0	250,3	249,5	248,7	248,0	247,2	246,4
62	245,6	244,9	244,1	243,4	242,6	241,8	241,1	240,3	239,6	238,8	238,0	237,3
63	236,5	235,8	235,0	234,3	233,6	232,8	232,1	231,3	230,6	229,9	229,1	228,4
64	227,6	226,9	226,2	225,5	224,7	224,0	223,3	222,5	221,8	221,1	220,3	219,6
65	218,9	218,2	217,5	216,8	216,0	215,3	214,6	213,9	213,2	212,5	211,8	211,1
66	210,4	209,7	209,0	208,3	207,6	206,9	206,2	205,5	204,8	204,1	203,4	202,7
67	202,0	201,3	200,6	199,9	199,2	198,5	197,8	197,1	196,4	195,8	195,1	194,4

Table E. LIFE EXPECTANCY FOR BOTH SEXES COMBINED IN 2022 (cont.)
(Expected months of future life by age)

Age in completed years	Months above full year of age											
	0	1	2	3	4	5	6	7	8	9	10	11
68	193,7	193,0	192,3	191,6	191,0	190,3	189,6	188,9	188,2	187,6	186,9	186,2
69	185,5	184,9	184,2	183,5	182,8	182,2	181,5	180,8	180,2	179,5	178,8	178,2
70	177,5	176,8	176,2	175,5	174,8	174,2	173,5	172,9	172,2	171,5	170,9	170,2
71	169,6	168,9	168,3	167,6	167,0	166,3	165,7	165,0	164,4	163,7	163,1	162,4
72	161,8	161,1	160,5	159,8	159,2	158,6	157,9	157,3	156,6	156,0	155,4	154,7
73	154,1	153,5	152,8	152,2	151,6	150,9	150,3	149,7	149,0	148,4	147,8	147,2
74	146,5	145,9	145,3	144,7	144,0	143,4	142,8	142,2	141,6	140,9	140,3	139,7
75	139,1	138,5	137,9	137,3	136,7	136,1	135,5	134,9	134,3	133,7	133,1	132,5
76	131,9	131,3	130,7	130,1	129,5	128,9	128,3	127,8	127,2	126,6	126,0	125,4
77	124,8	124,2	123,6	123,1	122,5	121,9	121,3	120,7	120,2	119,6	119,0	118,4
78	117,8	117,3	116,7	116,1	115,6	115,0	114,4	113,9	113,3	112,7	112,1	111,6
79	111,0	110,5	109,9	109,4	108,8	108,3	107,7	107,2	106,6	106,1	105,5	105,0
80	104,4	103,9	103,3	102,8	102,2	101,7	101,2	100,6	100,1	99,5	99,0	98,5
81	97,9	97,4	96,9	96,4	95,9	95,4	94,9	94,4	93,8	93,3	92,8	92,3
82	91,8	91,3	90,8	90,3	89,8	89,3	88,8	88,3	87,8	87,3	86,8	86,3
83	85,8	85,3	84,9	84,4	83,9	83,5	83,0	82,5	82,0	81,6	81,1	80,6
84	80,2	79,7	79,3	78,8	78,4	78,0	77,5	77,1	76,6	76,2	75,8	75,3
85	74,9	74,5	74,0	73,6	73,2	72,8	72,4	71,9	71,5	71,1	70,7	70,3
86	69,8	69,5	69,1	68,7	68,3	67,9	67,5	67,1	66,7	66,3	65,9	65,6
87	65,2	64,8	64,4	64,1	63,7	63,4	63,0	62,6	62,3	61,9	61,6	61,2
88	60,8	60,5	60,2	59,9	59,5	59,2	58,9	58,5	58,2	57,9	57,5	57,2
89	56,9	56,6	56,2	55,9	55,6	55,3	55,0	54,6	54,3	54,0	53,7	53,4
90	53,0	52,8	52,5	52,2	51,9	51,6	51,3	51,0	50,7	50,4	50,1	49,9