

# Statistics in focus

## POPULATION AND SOCIAL CONDITIONS

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### Population

Author

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# Long-term population projections at national level

Based on past trends, an analysis of driving forces and expert opinion, Eurostat has produced internationally consistent population projections (EUROPOP2004: EUROstat POulation Projections 2004-based) from 1 January 2005 to 1 January 2051 by sex, year and age for each Member State plus Acceding Countries (Bulgaria and Romania).

Eurostat's set of population projections is just one of several population change scenarios based on assumptions of fertility, mortality and migration. The current scenario, named Trend, does not take account of any future measures that might influence demographic trends and comprises seven variants: 'baseline' (BL), 'high population' (HP), 'low population' (LP), 'younger age profile population' (YP), 'older age profile population' (OP), 'high fertility' (HF) and 'zero migration' (ZM) (see methodological notes). All these variants must be interpreted as possible alternative developments in population except the latter, which helps in understanding the role played by migration in the evolution of population size and structure. Future results might obviously deviate from the range mapped out by the variants.

### The EU population is likely to decline...

Most of the variants show a decline in EU population in the first half of the new century. The starting year of the population decrease differs across variants: 2008 for the 'zero migration', 2009 for the 'low population', 2011 for the 'older age profile population', 2025 for the 'baseline' and 2043 for the 'high fertility' variants, while for 'younger age population' and 'high population' the population size never declines over the projections horizon (Figure 1).

Indeed, due to the interactions between the assumed fertility, mortality and migration and the starting population structure, in all variants deaths will outnumber births and positive net migration will postpone the population decrease only temporarily. However, particular combinations of demographic factors can still ensure population growth until the mid-century.

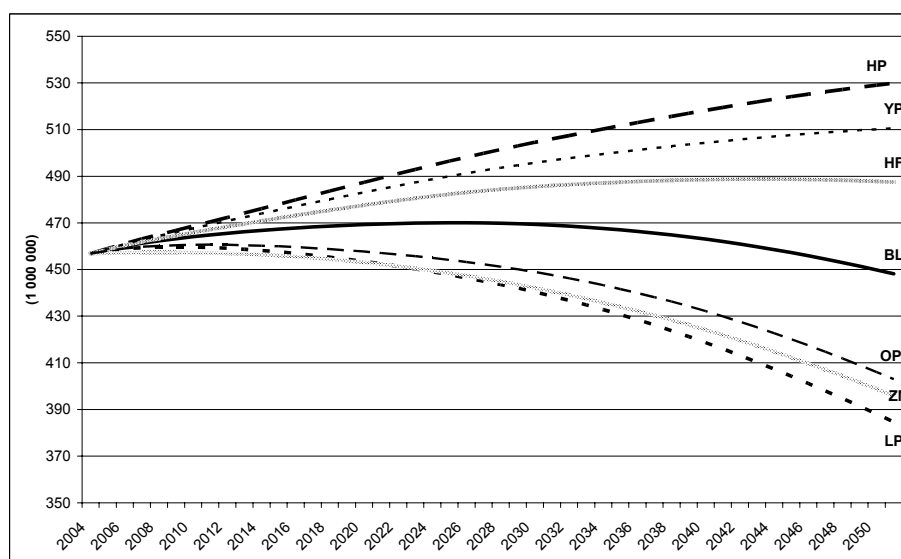


Figure 1: Projected total population, Trend scenario variants, EU-25, 2004-2051.  
Source: Eurostat, EUROPOP2004

## ...but it is certain to age

The share of the population over the age of 65 will increase considerably in the European Union. Indeed, the old age dependency ratio (persons aged 65 years and over compared with persons 15-64 years-old) is expected to approximately double in all the variants from the initial 25% in 2004 (Figure 2).

This means that whereas in 2004 there was one elderly inactive person for every four persons of working age, in 2050 there would be about one inactive person for every two of working age. Over the projections period, the assumed migration flows would partially offset the ageing process. An increase in fertility would have a similar effect, but with a different timeframe.

The size of the aged population is expected to grow not only in relative but also in absolute terms. Indeed, the number of persons aged 80 and over (oldest old) is expected to nearly triple, rising from 18 million in 2004 to about<sup>1</sup> 50 million in 2051 (Figure 3). This impact will be more visible from 2025 onwards, due to the progressive ageing of the post-war *baby boom* generations and the expected increase in life expectancy.

The ageing process is also visible in the whole structure of the population: the median<sup>2</sup> age of the EU population is projected to increase (Figure 4). Besides the increasing number of people who survive to the oldest ages, this is also due to the shrinkage in the younger age population, caused by persistent levels of low fertility.

The reduction in median age that can be observed in some variants in Figure 4 is due to the assumption of a greater impact of fertility on the demographic development. Therefore, the current process of *dejuvenation* of the EU population might stop in the future.

The persistent low fertility is also the main cause of the expected shrinkage in the working age population, which is only partially offset by migratory flows (Table 3).

Therefore, the older population is certainly expected to increase over the next years. Compared to the total population, its proportion will change according to the extent fertility impacts on the demographic development of the EU population.

<sup>1</sup> Several variants in Figure 3 present similar values due to the projections horizon. For instance, a person born in 2004 will not reach the age of 80 in 2051 and therefore the 'high fertility' and the 'baseline' variants, which differ only for assumptions in fertility, will have equal results for the oldest old population.

<sup>2</sup> Median age is the point where exactly one half of the population is older, and the other half is younger.

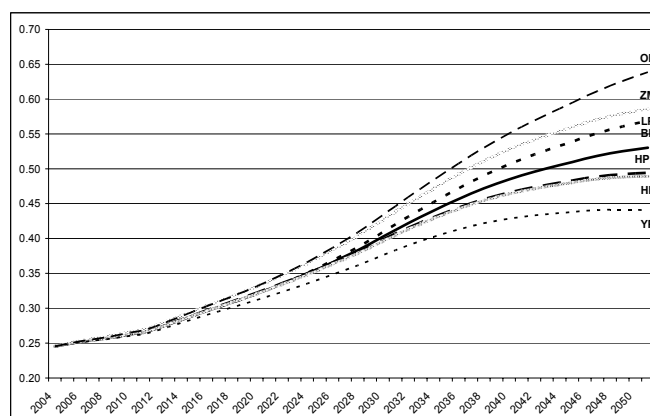


Figure 2: Projected old age dependency ratio, Trend scenario variants, EU-25, 2004-2051.

Source: Eurostat, EUROPOP2004

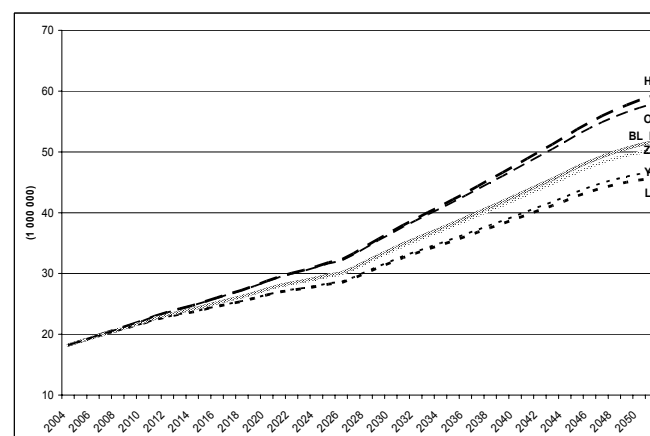


Figure 3: Projected total population aged 80 years and over, Trend scenario variants, EU-25, 2004-2051.

Source: Eurostat, EUROPOP2004

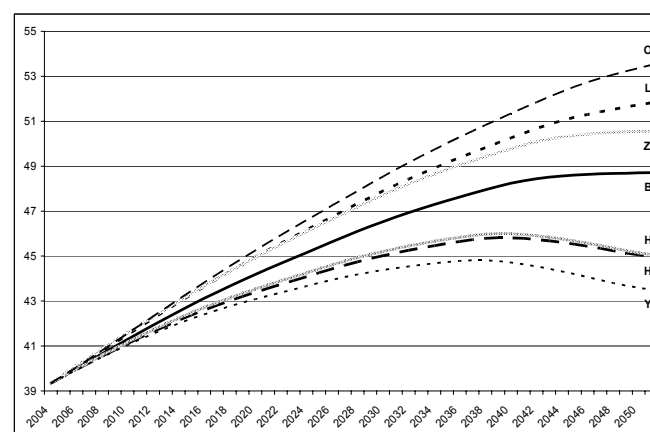


Figure 4: Projected median age, Trend scenario variants, EU-25, 2004-2051.

Source: Eurostat, EUROPOP2004

## Migration alone will not ensure EU population growth

The absence of an adequate increase in fertility levels would cause a further decrease in the number of births. Indeed, smaller generations of women reaching reproductive age will result in fewer births than in the past (Figure 5).

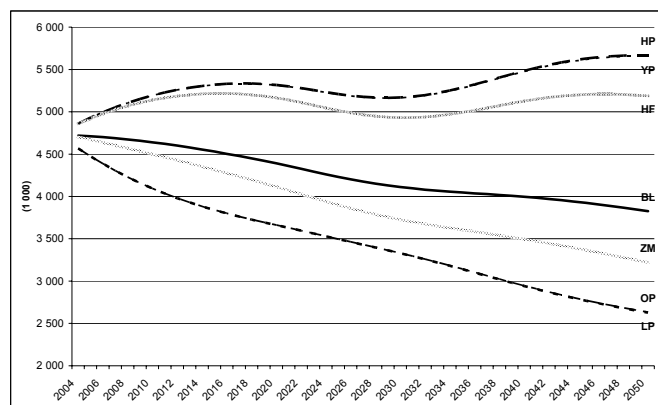


Figure 5: Projected births, Trend scenario variants, EU-25, 2004-2050. Source: Eurostat, EUROPOP2004

On the other hand, due to the increasing number of persons reaching older ages, the number of deaths in the EU is expected to increase in the first half of the century (Figure 6).

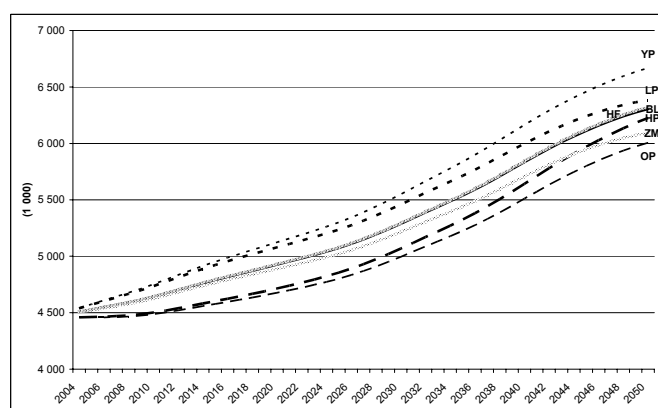


Figure 6: Projected deaths, Trend scenario variants, EU-25, 2004-2050. Source: Eurostat, EUROPOP2004

It is therefore expected that the increasing number of deaths will sooner or later outnumber births and hence population growth due to natural increase will cease. Positive net migration will thus be the only population growth factor, although in the long run it will not necessarily counterbalance the negative natural change (Figure 7), despite the fact that migrants contribute to the population growth not only in absolute terms but also via an increase in fertility, i.e. births due to female migrants.

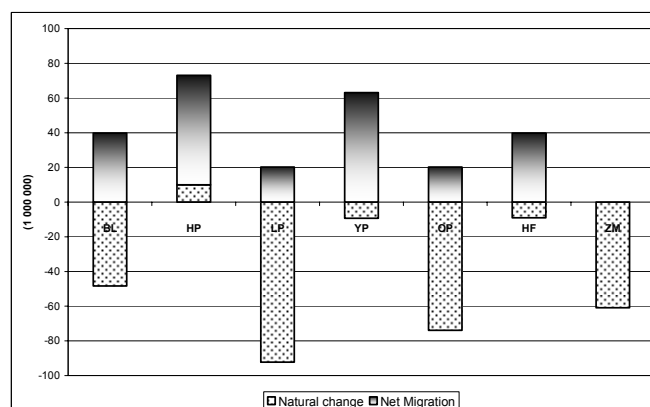


Figure 7: Cumulated values over the whole projections period of natural change and net migration, Trend scenario variants, EU-25, 2004-2050.

Source: Eurostat, EUROPOP2004

Focusing on the working age population, the needs in terms of migrants to replace these declining age groups and thus to sustain the growth of the labour force would be even higher. For instance, taking the 'baseline' variant as a reference, even with positive net migration of around 40 million persons over the projections period (see methodological notes), in 2050 the working age population of the EU would have decreased by 52 million, and total population by 7 million (Tables 1 and 3). Total population declines less because the increase in life expectancy will mean people living longer, thus increasing this segment of the population, while, over the projections period, the birth deficit will reflect its impact more clearly on the younger age groups.

## Significant differences among countries

The demographic processes described above would affect the Member States and the Acceding Countries to a different extent and timeframe.

Taking the 'baseline' variant as a reference, 12 of the 25 Member States are expected to have population growth at the end of the projections period (Table 5). Of those, France, Ireland, Cyprus, Luxembourg and Sweden will also have positive natural change, which for the first two is even higher than assumed net migration.

Eastern and Baltic countries, as well as the Acceding Countries, are expected instead to show a considerable decrease in their populations.

Differences are projected in terms of age composition as well. Mediterranean countries are expected to face the major challenges of an ageing population, especially in the second half of the projections period, while other countries, such as Luxembourg and the Netherlands, will observe a much less significant change (Figure 8).

	Population 1.1.2004	Baseline			High Population			Low Population			Younger Age Profile Population			Older Age Profile Population			High Fertility			Zero Migration			
		2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	
EU-25	456,815	464,054	469,365	449,831	468,622	504,515	529,007	459,658	440,336	388,071	467,683	495,780	510,138	460,594	448,924	406,014	465,851	485,516	487,781	457,232	442,160	398,761	EU-25
EU-15	382,674	390,652	398,737	384,356	394,324	426,696	445,499	387,106	375,272	334,753	393,591	419,762	431,515	387,837	382,109	348,200	391,890	411,053	413,585	383,773	371,871	336,358	EU-15
Belgium	10,396	10,554	10,984	10,906	10,645	11,670	12,432	10,486	10,430	9,581	10,626	11,498	12,085	10,505	10,602	9,921	10,582	11,287	11,662	10,413	10,277	9,494	BE
Czech Republic	10,211	10,122	9,693	8,894	10,238	10,657	11,357	10,019	8,976	7,256	10,212	10,420	10,699	10,045	9,208	7,872	10,197	10,192	10,034	10,098	9,466	8,139	CZ
Denmark	5,398	5,465	5,577	5,430	5,502	5,863	6,099	5,424	5,256	4,723	5,492	5,760	5,906	5,434	5,358	4,911	5,477	5,703	5,744	5,418	5,345	4,979	DK
Germany	82,532	82,824	81,146	74,642	83,624	88,069	89,943	81,817	75,251	63,412	83,460	86,469	86,835	81,980	76,825	66,377	83,072	83,879	80,989	81,523	74,887	63,237	DE
Estonia	1,351	1,314	1,202	1,126	1,345	1,359	1,468	1,284	1,079	897	1,342	1,331	1,388	1,287	1,105	965	1,321	1,260	1,286	1,320	1,223	1,100	EE
Greece	11,041	11,269	11,316	10,632	11,374	12,011	12,062	11,144	10,488	8,869	11,354	11,808	11,643	11,164	10,684	9,260	11,297	11,604	11,323	11,019	10,253	8,858	EL
Spain	42,345	44,603	45,379	42,834	45,076	48,504	49,420	44,194	42,832	37,497	44,993	47,725	47,799	44,277	43,596	39,042	44,809	47,028	46,544	42,669	40,739	35,715	ES
France	59,901	61,486	65,118	65,704	61,927	68,651	74,107	61,106	62,121	59,152	61,829	67,674	72,081	61,204	63,091	61,128	61,666	66,924	70,221	61,085	63,080	61,697	FR
Ireland	4,028	4,323	5,066	5,478	4,368	5,409	6,240	4,278	4,736	4,744	4,362	5,340	6,068	4,284	4,803	4,903	4,334	5,191	5,791	4,218	4,615	4,693	IE
Italy	57,888	58,631	57,071	52,709	59,157	60,823	60,444	58,304	54,799	47,511	59,037	59,849	58,567	58,424	55,765	49,341	58,822	58,870	56,857	57,521	52,921	45,357	IT
Cyprus	730	784	921	975	807	1,072	1,334	761	807	741	807	1,049	1,261	762	827	803	791	976	1,098	745	768	708	CY
Latvia	2,319	2,240	2,022	1,873	2,274	2,246	2,413	2,207	1,847	1,509	2,270	2,204	2,282	2,211	1,887	2,255	2,252	2,127	2,254	2,058	1,831	1,311	LV
Lithuania	3,446	3,345	3,092	2,881	3,393	3,418	3,674	3,300	2,830	2,337	3,388	3,362	3,483	3,205	2,884	2,507	3,368	3,253	3,254	3,381	3,167	2,835	LT
Luxembourg	452	477	567	643	482	607	734	471	511	523	481	599	716	472	519	541	478	579	676	458	464	437	LU
Hungary	10,117	9,982	9,484	8,915	10,086	10,385	11,275	9,880	8,757	7,272	10,047	10,084	10,586	9,919	9,048	7,912	10,060	9,988	10,086	9,988	9,135	8,075	HU
Malta	400	423	479	508	432	552	693	414	422	385	431	537	654	414	436	420	427	506	572	407	408	371	MT
Netherlands	16,258	16,672	17,589	17,406	16,857	18,845	20,318	16,539	16,497	15,038	16,831	18,559	19,738	16,656	16,781	15,602	16,724	18,109	18,681	16,490	14,667	15,135	NL
Austria	8,114	8,256	8,520	8,216	8,344	9,245	9,705	8,173	7,993	7,005	8,331	9,121	9,443	8,187	8,116	7,259	8,284	8,813	8,905	8,099	7,760	6,786	AT
Poland	38,191	37,830	36,542	33,665	38,250	40,210	42,812	37,433	33,765	27,574	38,142	39,287	40,310	37,540	34,667	29,883	38,126	38,594	38,272	38,017	37,028	33,158	PL
Portugal	10,475	10,686	10,660	10,009	10,769	11,433	11,658	10,538	9,863	8,314	10,749	11,233	11,232	10,559	10,057	8,708	10,715	10,915	10,602	10,503	10,100	9,115	PT
Slovenia	1,996	2,015	2,006	1,901	2,069	2,272	2,521	1,964	1,802	1,491	2,063	2,217	2,356	1,970	1,853	1,635	2,028	2,105	2,128	1,978	1,855	1,584	SI
Slovakia	5,380	5,347	5,186	4,738	5,404	5,649	5,960	5,291	4,779	3,856	5,391	5,526	5,604	5,303	4,899	4,185	5,386	5,400	5,359	5,362	5,182	4,602	SK
Finland	5,220	5,294	5,443	5,217	5,333	5,715	5,792	5,261	5,161	4,619	5,323	5,618	5,616	5,271	5,257	4,790	5,306	5,562	5,509	5,256	5,264	4,878	FI
Sweden	8,976	9,187	9,911	10,202	9,259	10,482	11,404	9,076	9,243	8,701	9,243	10,336	11,134	9,092	9,387	8,963	9,205	10,183	10,877	9,020	9,110	8,658	SE
United Kingdom	59,652	60,924	64,388	64,330	61,607	69,371	75,142	60,293	60,091	55,065	61,481	68,173	72,653	60,419	61,268	57,454	61,117	66,405	69,204	60,082	60,589	57,319	UK
Bulgaria	7,801	7,439	6,175	5,094	7,531	6,797	6,576	7,350	5,650	3,985	7,504	6,602	6,124	7,377	5,843	4,411	7,485	6,457	5,741	7,522	6,594	5,542	BG
Romania	21,711	21,345	19,244	17,125	21,577	20,894	21,498	21,119	17,744	13,890	21,519	20,410	20,166	21,175	18,212	15,117	21,502	20,268	19,468	21,436	20,009	17,698	RO

Table 1: Projected total population on 1 January for selected years, variants of the Trend scenario (in thousand).

Source: Eurostat, EUROPOP2004

	Population 1.1.2004	Baseline			High Population			Low Population			Younger Age Profile Population			Older Age Profile Population			High Fertility			Zero Migration			
		2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	
EU-25	74,768	71,919	65,839	60,412	74,168	80,625	84,698	69,622	54,382	43,624	74,157	80,522	84,479	69,631	54,452	43,736	73,716	77,311	78,027	70,527	60,184	51,415	EU-25
EU-15	62,391	61,237	55,958	51,792	62,900	67,678	70,366	59,475	46,315	37,769	62,894	67,606	70,223	59,481	46,364	37,848	62,475	64,919	65,402	59,852	50,407	43,499	EU-15
Belgium	1,797	1,729	1,693	1,599	1,774	2,010	2,109	1,690	1,441	1,186	1,774	2,008	2,105	1,691	1,443	1,189	1,757	1,920	1,965	1,681	1,493	1,281	BE
Czech Republic	1,554	1,374	1,252	1,118	1,454	1,663	1,888	1,303	1,021	743	1,453	1,661	1,881	1,303	1,022	746	1,448	1,576	1,642	1,369	1,209	970	CZ
Denmark	1,018	985	910	850	1,003	1,036	1,063	961	749	614	1,003	1,034	1,061	961	750	615	996	1,005	999	970	847	749	DK
Germany	12,162	11,315	10,303	8,904	11,670	13,152	13,304	10,899	8,322	6,231	11,669	13,141	13,282	10,900	8,329	6,242	11,564	12,342	11,792	11,024	8,961	6,922	DE
Estonia	216	193	182	166	204	239	272	184	148	114	204	238	271	184	149	115	201	222	234	194	185	157	EE
Greece	1,598	1,596	1,428	1,308	1,636	1,690	1,714	1,536	1,099	843	1,635	1,689	1,710	1,536	1,100	844	1,625	1,638	1,632	1,557	1,261	1,060	EL
Spain	6,151	6,612	5,313	4,912	6,859	6,621	6,927	6,425	4,411	3,611	6,858	6,614	6,913	6,426	4,416	3,618	6,819	6,419	6,586	6,275	4,586	3,937	ES
France	11,125	11,196	10,627	10,350	11,447	12,262	13,197	10,919	9,062	7,968	11,446	12,249	13,172	10,920	9,071	7,983	11,376	11,949	12,544	11,062	10,134	9,519	FR
Ireland	841	906	854	877	926	966	1,100	886	732	680	925	985	1,097	886	733	680	918	946	1,030	878	768	739	IE
Italy	8,217	8,181	6,619	5,909	8,419	8,197	8,244	7,959	5,585	4,443	8,418	8,188	8,227	7,960	5,591	4,453	8,372	7,917	7,784	7,964	5,828	4,768	IT
Cyprus	146	130	141	130	139	196	234	122	109	81	139	196	232	123	109	81	137	177	186	128	113	86	CY
Latvia	357	306	305	277	325	398	454	290	249	188	324	396	451	290	250	190	322	376	399	309	310	26	

	Population 1.1.2004	Baseline			High Population			Low Population			Younger Age Profile Population			Older Age Profile Population			High Fertility			Zero Migration			
		2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	
EU-25	306,764	310,537	287,679	254,878	312,348	303,060	297,479	308,812	273,877	220,124	312,161	301,748	295,328	308,998	275,135	221,939	310,537	292,358	275,213	305,380	267,745	219,465	EU-25
EU-15	255,112	258,457	242,809	217,075	260,036	254,977	250,118	256,964	231,868	189,019	259,914	254,044	248,716	257,086	232,766	190,217	258,457	246,163	232,695	253,208	223,099	183,924	EU-15
Belgium	6,819	6,980	6,574	6,285	7,019	6,873	7,112	6,955	6,334	5,524	7,016	6,848	7,071	6,959	6,359	5,560	6,980	6,650	6,675	6,879	6,051	5,262	BE
Czech Republic	7,234	7,177	6,157	5,023	7,203	6,593	6,337	7,155	5,788	4,123	7,195	6,553	6,259	7,162	6,332	4,188	7,177	6,332	5,639	7,158	5,988	4,502	CZ
Denmark	3,575	3,589	3,405	3,271	3,603	3,514	3,617	3,576	3,289	2,892	3,601	3,501	3,598	3,578	3,301	3,436	3,589	3,436	3,558	3,243	2,956	DK	
Germany	55,510	54,593	48,535	42,205	54,951	51,703	50,934	54,088	45,428	35,542	54,924	51,504	50,649	54,115	45,618	35,778	54,593	49,229	45,664	53,628	43,948	34,053	DE
Estonia	916	899	765	670	918	847	853	880	692	543	917	839	835	881	699	557	899	783	743	904	779	649	EE
Greece	7,472	7,557	7,108	5,870	7,605	7,400	6,584	7,509	6,738	4,880	7,602	7,371	6,542	7,512	6,766	4,915	7,557	7,186	6,238	7,380	6,386	4,733	EL
Spain	29,050	30,297	28,841	22,644	30,477	30,213	26,084	30,119	27,592	19,647	30,462	30,084	25,920	30,133	27,716	19,787	30,297	29,383	24,680	28,805	25,465	18,112	ES
France	38,969	39,960	38,720	37,426	40,119	40,151	41,752	38,889	37,681	34,159	40,099	39,999	41,506	39,910	37,829	34,383	39,960	39,203	39,750	39,674	37,240	34,739	FR
Ireland	2,738	2,908	3,284	3,166	2,929	3,451	3,556	2,887	3,116	2,767	2,928	3,439	3,536	2,888	3,127	2,784	2,908	3,317	3,326	2,836	2,958	2,697	IE
Italy	38,549	38,414	34,737	28,201	38,611	36,217	32,247	38,331	33,754	25,307	38,596	36,112	32,106	38,347	33,856	25,428	38,414	35,237	30,474	37,554	31,605	23,145	IT
Cyprus	497	549	588	590	561	663	793	536	524	454	561	660	783	536	527	461	549	606	657	518	485	412	CY
Latvia	1,587	1,544	1,287	1,108	1,557	1,394	1,398	1,531	1,193	903	1,556	1,385	1,370	1,544	1,201	925	1,544	1,325	1,241	1,555	1,311	1,075	LV
Lithuania	2,319	2,308	1,976	1,717	2,329	2,134	2,148	2,288	1,832	1,405	2,327	2,117	2,105	2,290	1,848	1,439	2,308	2,029	1,915	2,339	2,029	1,672	LT
Luxembourg	303	322	356	394	325	377	446	319	322	325	375	377	444	319	327	320	359	410	308	379	279	247	LU
Hungary	6,944	6,852	6,028	5,182	6,863	6,399	6,421	6,840	5,689	4,287	6,851	6,329	6,308	6,853	5,757	4,384	6,852	6,204	5,809	6,795	5,806	4,610	HU
Malta	275	294	298	309	298	334	412	290	267	237	298	332	400	290	268	240	294	307	342	282	249	215	MT
Netherlands	10,991	11,214	10,782	10,568	11,301	11,355	12,215	11,168	10,299	9,204	11,296	11,317	12,149	11,172	10,336	9,261	11,214	10,920	11,238	11,085	9,987	8,904	NL
Austria	5,531	5,562	5,236	4,705	5,603	5,590	5,570	5,520	4,966	3,952	5,601	5,573	5,545	5,522	4,982	3,952	5,562	5,313	5,078	5,445	4,664	3,651	AT
Poland	26,659	27,159	23,121	19,399	27,242	24,733	24,225	27,074	21,698	16,056	27,208	24,545	23,848	27,107	21,877	16,368	27,159	23,832	21,909	27,338	23,462	18,911	PL
Portugal	7,064	7,122	6,638	5,502	7,160	7,021	6,385	7,047	6,270	4,558	7,156	6,988	6,337	7,051	6,301	4,597	7,122	6,714	5,821	6,978	6,245	4,938	PT
Slovenia	1,405	1,410	1,245	1,065	1,439	1,382	1,390	1,381	1,129	845	1,438	1,371	1,370	1,410	1,138	860	1,410	1,279	1,187	1,381	1,136	858	SI
Slovakia	3,815	3,887	3,405	2,741	3,901	3,605	3,384	3,872	3,197	2,251	3,896	3,573	3,325	3,878	3,228	2,300	3,887	3,498	3,078	3,902	3,401	2,638	SK
Finland	3,486	3,526	3,161	3,014	3,541	3,605	3,297	3,519	3,070	2,708	3,539	3,276	3,276	3,521	3,082	3,166	3,526	3,192	3,036	3,501	3,032	2,792	FI
Sweden	5,835	5,999	5,943	6,060	6,032	6,164	6,678	5,958	5,633	5,193	6,030	6,149	6,654	5,960	5,647	5,214	5,999	6,003	6,407	5,883	5,373	4,991	SE
United Kingdom	39,218	40,413	39,490	37,765	40,761	41,679	43,640	40,080	37,373	32,366	40,741	41,529	43,383	40,099	37,517	32,579	40,413	40,332	39,695	36,618	32,704	27,400	UK
Bulgaria	5,362	5,164	3,915	2,800	5,194	4,226	3,596	5,134	3,618	2,138	5,187	4,187	3,531	5,141	3,655	2,187	5,164	4,020	3,152	5,231	4,250	3,116	BG
Romania	15,012	14,951	12,910	9,920	14,999	13,628	12,226	14,901	12,146	8,098	14,977	13,480	11,984	14,923	12,288	8,297	14,951	13,273	11,196	15,023	13,471	10,305	RO

Table 3: Projected population aged 15-64 years on 1 January for selected years, variants of the Trend scenario (in thousand).

Source: Eurostat, EUROPOP2004

	Population 1.1.2004	Baseline			High Population			Low Population			Younger Age Profile Population			Older Age Profile Population			High Fertility			Zero Migration			
		2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	2010	2030	2050	
EU-25	75,284	81,598	115,848	134,541	82,106	120,830	146,831	81,225	112,077	124,324	81,365	113,510	130,331	81,965	119,338	140,339	81,598	115,848	134,541	81,325	114,232	127,880	EU-25
EU-15	65,171	70,959	99,970	115,489	71,388	104,042	125,015	70,666	97,088	107,965	70,783	98,112	112,576	71,270	102,980	120,135	70,959	99,970	115,489	70,713	98,366	108,935	EU-15
Belgium	1,780	1,846	2,717	3,022	1,851	2,788	3,210	1,841	2,655	2,871	1,837	2,643	2,909	1,856	2,801	3,172	1,846	2,717	3,022	1,853	2,733	2,951	BE
Czech Republic	1,423	1,571	2,283	2,753	1,581	2,401	3,132	1,561	2,167	2,390	1,563	2,207	2,559	1,579	2,359	2,938	1,571	2,283	2,753	1,570	2,269	2,667	CZ
Denmark	805	891	1,263	1,309	896	1,313	1,418	887	1,218	1,217	888	1,225	1,247	895	1,307	1,387	891	1,263	1,309	890	1,255	1,274	DK
Germany	14,860	16,915	22,308	23,533	17,003	23,213	25,705	16,831	21,501	21,638	16,868	21,824	22,904	16,966	22,878	24,357	16,915	22,308	23,533	16,872	21,978	22,261	DE
Estonia	218	222	256	289	223	273	343	220	239	240	222	254	282	222	257	294	222	256	289	222	258	294	EE
Greece	1,971	2,116	2,780	3,454	2,134	2,920	3,764	2,099	2,650	3,146	2,116	2,749	3,390	2,116	2,817	3,500	2,116	2,780	3,454	2,082	2,606	3,064	EL
Spain	7,144	7,694	11,226	15,278	7,741	11,670	16,409	7,650	10,829	14,239	7,673	11,028	14,966	7,718	11,464	15,636	7,694	11,226	15,278	7,589	10,688	13,666	ES
France	9,806	10,330	15,771	17,928	10,361	16,239	19,158	10,298	15,378	17,025	10,284	15,426	17,403	10,375	16,191	18,762	10,330	15,771	17,928	10,348	15,706	17,439	FR
Ireland	449	509	928	1,435	513	973	1,584	505	888	1,299	508	917	1,435	510	942	1,439	509	928	1,435	504	889	1,257	IE
Italy	11,122	12,035	15,715	18,599	12,127	16,409	19,953	12,014	15,460	17,761	12,023	15,549	18,233	12,117	16,318	19,460	12,035	15,715	18,599	12,003	15,488	17,443	IT
Cyprus	87	105	193	255	107	212	308	103	174	206	107	194	246	103	191	261	105	193	255	100	170	210	CY
Latvia	375	389	430	488	393	454	561	386	405	417	389	423	461	390	436	511	389	430	488	391	436	494	LV
Lithuania	518	540	661	770	542	691</																	

	Observed population 1.1.2004	Baseline					Population 1.1.2051	
		Cumulated births	Cumulated deaths	Natural change	Net migration	Total change		
EU-25	456 815	199 694	248 045	-48 351	39 710	-8 641	448 174	EU-25
EU-15	382 674	170 300	207 086	-36 786	37 123	338	383 012	EU-15
Belgium	10 396	5 022	5 427	-405	897	492	10 888	BE
Czech Republic	10 211	3 774	5 784	-2 010	647	-1 363	8 848	CZ
Denmark	5 398	2 735	3 037	-302	323	22	5 419	DK
Germany	82 532	29 880	47 191	-17 311	8 980	-8 330	74 201	DE
Estonia	1 351	561	809	-248	19	-229	1 121	EE
Greece	11 041	4 352	6 559	-2 207	1 743	-464	10 578	EL
Spain	42 345	16 856	22 863	-6 007	6 235	228	42 573	ES
France	59 901	32 972	30 053	2 919	2 823	5 741	65 642	FR
Ireland	4 028	2 718	1 903	814	645	1 459	5 487	IE
Italy	57 888	20 402	31 680	-11 278	5 777	-5 501	52 387	IT
Cyprus	730	401	392	8	238	247	977	CY
Latvia	2 319	933	1 418	-484	30	-454	1 865	LV
Lithuania	3 446	1 350	1 957	-606	28	-578	2 868	LT
Luxembourg	452	296	233	63	132	194	646	LU
Hungary	10 117	4 063	6 092	-2 029	795	-1 233	8 883	HU
Malta	400	219	223	-4	113	110	510	MT
Netherlands	16 258	8 622	8 980	-358	1 480	1 121	17 379	NL
Austria	8 114	3 300	4 212	-912	985	73	8 187	AT
Poland	38 191	15 209	20 231	-5 022	318	-4 704	33 487	PL
Portugal	10 475	4 505	5 832	-1 326	808	-518	9 957	PT
Slovenia	1 996	771	1 162	-390	287	-103	1 893	SI
Slovakia	5 380	2 111	2 892	-781	109	-671	4 709	SK
Finland	5 220	2 573	2 875	-303	288	-15	5 205	FI
Sweden	8 976	5 022	4 851	171	1 069	1 240	10 216	SE
United Kingdom	59 652	31 047	31 390	-343	4 939	4 596	64 247	UK
Bulgaria	7 801	2 229	4 740	-2 512	-252	-2 764	5 038	BG
Romania	21 711	7 947	12 194	-4 247	-475	-4 722	16 989	RO

Table 5: Demographic balance 1.1.2004 – 1.1.2051, 'baseline' variant of the Trend scenario (in thousand).  
Source: Eurostat, EUROPOP2004

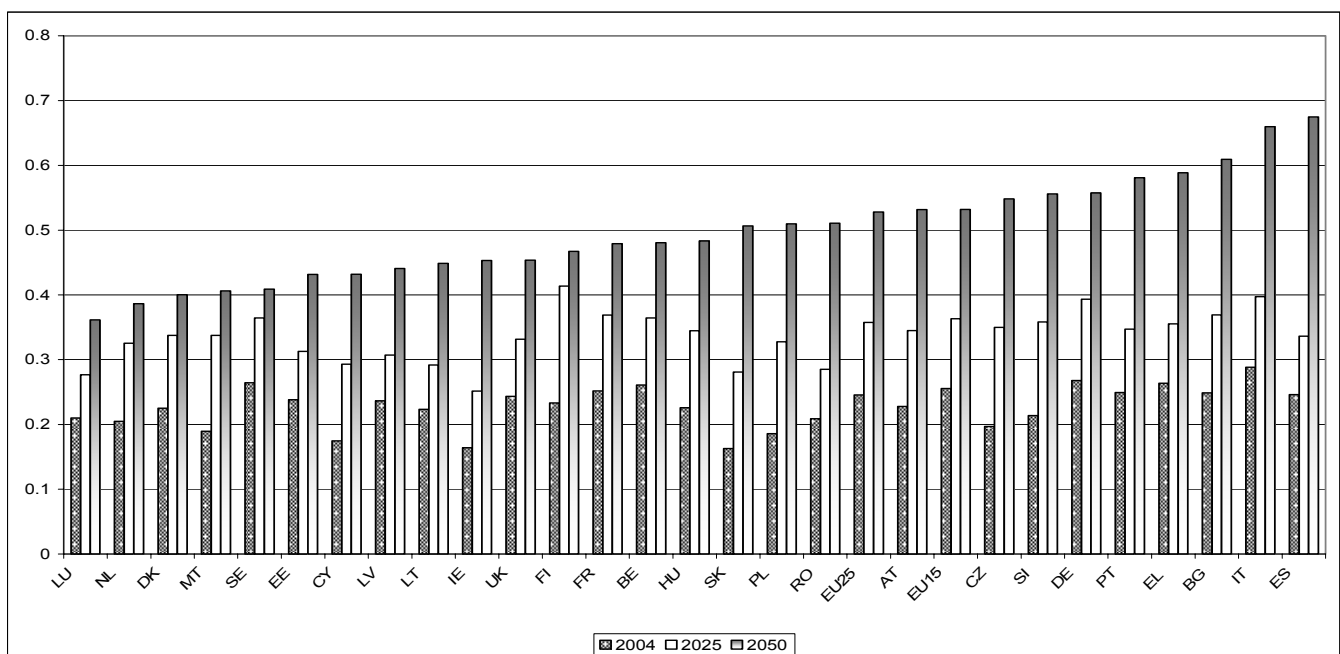


Figure 8: Projected old age dependency ratio by Member State and Acceding Country for selected years, 'baseline' variant of the Trend scenario. Source: Eurostat, EUROPOP2004

## ➤ ESSENTIAL INFORMATION – METHODOLOGICAL NOTES

For the Trend scenario, three sets of assumptions (Base, High and Low) have been produced on fertility, mortality and migration, covering a time horizon until 2050. These assumptions can be summarised by means of indicators such as total fertility rate (TFR), life expectancy at birth and net migration.

The fertility patterns in the EU are assumed to be characterised by a transition towards late childbearing. The Member States are at different stages of transition: while Northern and Western countries are believed to be at a late/final phase of transition, Southern countries are at an intermediate stage and Eastern countries are assumed to be still at an early stage.

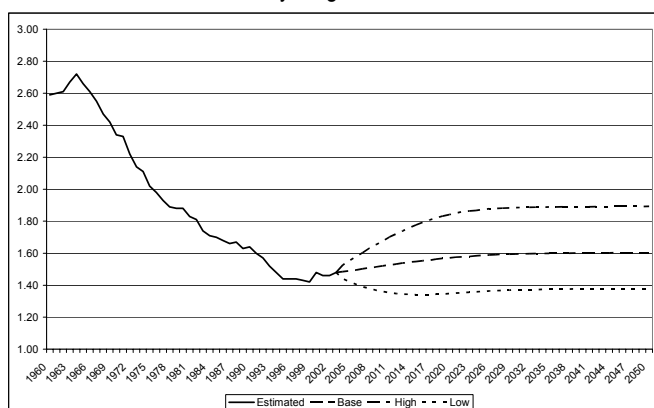


Figure 9: Estimated (1960-2003) and assumed (2004-2050) total fertility rate, EU-25

Source: Eurostat, EUROPOP2004

Total fertility rate is expected to rise gradually in countries experiencing postponement (Figure 9). It is assumed that Southern European countries will go through a rise in fertility before 2010, while this will remain low in Central-Eastern Europe for the forthcoming decade, before starting to rise again. No EU country will experience replacement fertility. On average, the TFR is assumed to be between 1.4 and 1.9.

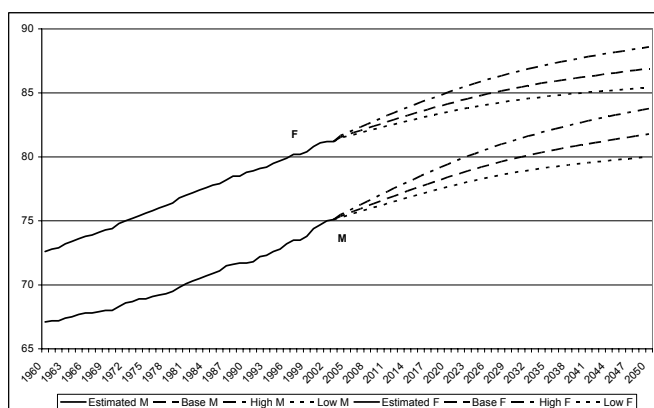


Figure 10: Estimated (1960-2003) and assumed (2004-2050) life expectancy at birth, for males and females, EU-25

Source: Eurostat, EUROPOP2004

Concerning mortality, it is assumed that life expectancy will continue to increase for the EU25, both for males and for females (Figure 10). Improvements will affect mainly the older ages and the differences in life expectancy between sexes will continue to decrease.

The decreasing trends in mortality over the last two decades are assumed to be the prevailing trends for future improvements. The new Member States are expected to converge to EU15 in terms of rates of improvements but not absolute mortality levels and the overall trend is supposed to slow over the projections period. Higher values are assumed on average in the EU15 area than in the new Member States.

The assumptions on migration explicitly take account of the impact of enlargement. It is assumed that there will be a gradual opening of national labour markets and that the new Member States will change, in the 'base' and 'high' variants, from sending to receiving countries. The EU25 area is projected to receive a surplus of nearly 40 million migrants over the whole projections period in the 'base' assumption, 63 million in the 'high' and 20 in the 'low' assumption. The bulk of it will be directed to the EU15 area, while the new Member States, although experiencing a positive balance at the end of the period in the 'high' and 'base' assumptions, are expected to reach much lower cumulative values.

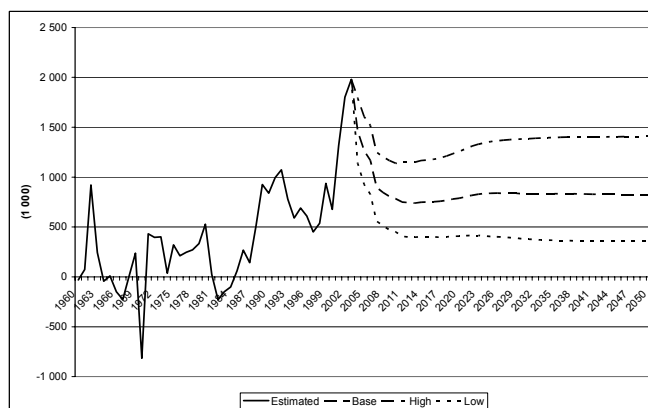


Figure 11: Estimated (1960-2003) and assumed (2004-2050) net migration, EU-25

Source: Eurostat, EUROPOP2004

The combination of the different assumptions produces the variants (Table 6). In the HP and LP variants, the assumptions all work together in the same direction for the growth or decrease of population; the other two variants (YP and OP) focus on the age structure of the population, while the HF and ZM variants highlight the impact of a specific component. No variant should be seen as a confidence limit in the statistical sense.

		Total Fertility Rate	Life Expectancy	Net Migration
Baseline	BL	Base	Base	Base
High Population	HP	High	High	High
Low Population	LP	Low	Low	Low
Younger Age Profile Population	YP	High	Low	High
Older Age Profile Population	OP	Low	High	Low
High Fertility	HF	High	Base	Base
Zero Migration	ZM	Base	Base	Zero














Table 6: Assumptions for the variants of the Trend scenario

The dataset adopted for the projections exercise was the one available in October 2004. Data for France refer to metropolitan France; data for Cyprus refer to the government controlled area.

For any definition, please refer to the information in the on-line database.

## Further information:

Data: [EUROSTAT Website/Home page/Population and social conditions/Data](#)

-  Population and social conditions
  -  Population
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    -  Population projections
      -  **Trend scenario, national level - base year 2004**
        -  Baseline variant
        -  High population variant
        -  Low population variant
        -  No migration variant
        -  High fertility variant
        -  Younger age profile population variant
        -  Older age profile population variant

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