

## Ageing in the European Union: where exactly? Rural areas are losing the young generation quicker than urban areas

**The European Union is ageing as a result of two developments: firstly, the number of people aged 65 years and over is increasing and, secondly, the number of children (age group 0-14 years) is decreasing. However, the Member States, the different types of areas (rural, intermediate, urban) and the different NUTS3 areas (districts) show considerable variations. Although in 2001 rural areas had on average an older population than intermediate or urban areas, from 2001 to 2006 the share of the old age group grew faster in urban areas.**

This publication presents the population changes for 1158 NUTS<sup>1</sup> 3 areas of 26 Member States (no data available for the United Kingdom<sup>2</sup>) for the period from 2001 to 2006 taking the level of rurality<sup>3</sup> of the NUTS3 areas into account for the three main age groups (0 to 14 years, 15 to 64 years, 65 years and over).

These changes inevitably lead to variations in the composition of the population. In this publication **ageing** is defined as the increase over time of the percentage share of people aged 65 and over in the total population of a given area.

### Introduction

Population changes (table 1) are the result of four driving factors over time for a given area: the number of births, the number of deaths, the number of people moving into the area and the number of those leaving it.

<sup>1</sup> NUTS = nomenclature des unités territoriales statistiques = Nomenclature of Territorial Units for Statistics ; more details in the methodological notes

<sup>2</sup> No population registers in UK, therefore no data available outside census years.

<sup>3</sup> OECD rural typology; the following types of areas are distinguished: PR=predominantly rural, IN= intermediate, PU=predominantly urban; more details in the methodological notes

**Table 1: Change in number of persons in EU, 2001-2006**

	Change of total population (persons)	Change in number of persons (%)		
		Age classes		
		0-14 y	15-64 y	65+ y
<b>EU-27 (-UK)</b>	8 217 047	-3 075 049	5 330 939	5 961 157
	(+1.9)	(-4.4)	(+1.9)	(+8.9)
<b>EU-15 (-UK)</b>	9 708 045	-473 689	4 972 546	5 209 188
	(+3.0)	(-0.9)	(+2.3)	(+9.8)
<b>NMS-12*</b>	-1 490 998	-2 601 360	358 393	751 969
	(-1.4)	(-14.0)	(+0.5)	(+5.3)

\*NMS: Member States which joined the EU on 1 May 2004 and 1 January 2007

Source: Eurostat ([reg\\_pjanagegr3](#))

## Rapid decrease in the number of children and their proportion in the population

Table 1 illustrates that the EU population is ageing. Although the population of the EU is growing, this is mainly due to an increase of the

population aged 65 and over, while the 0 to 14 years group is shrinking.

## Clear contrast between 'new' and 'old' Member States

The 'old' Member States (EU-15(-UK)) underwent a different evolution than the 'new' Member States (NMS-12<sup>4</sup>). While the population was increasing in the old Member States, the population in the new Member States was decreasing (table 1). The youngest age group in

particular declined significantly in number in the 'new' Member States (map 2). On the other hand, the age group which grew the most was people aged 65 and over (map 4), where a much bigger increase in the 'old' Member States is observed than in the 'new' Member States. More details on the relative changes of the old age group by Member State are presented in table 6.

<sup>4</sup> NMS: Member States which acceded the EU on 1 May 2004 and 1 January 2007

## The share of the population aged 65 and over goes up

Ageing is influenced not simply by the increase of the number of people aged 65 and over but also by the decrease in numbers of young people. Both developments lead to a considerable change of the share of the population aged 65 and over in the total population.

Table 2 gives an overview of the shares of the three age groups for 2001 and 2006 and their changes for the different types of areas for EU aggregates. In addition, the last column of table 6 shows the percentage share of the population

aged 65 and over in the different Member States in 2001 and 2006. The changes are biggest (>1.5% points) in Germany, Greece and Latvia, indicating a rapid ageing of their populations. However, in southern Member States (France, Spain, Portugal, Italy), where this group already accounts for more than 20% of the rural population (highlighted in table 6 in yellow), the change from 2001 to 2006 is smaller or even negative (Spain).

**Table 2: Change of shares of the three age groups for the different TOAs\* from 2001 to 2006 for EU-aggregates**

TOA*	Aggregate	Composition 2001 (%)			Composition 2006 (%)			Change in composition (%points)		
		0-14 2001	15-64 2001	65+ 2001	0-14 2006	15-64 2006	65+ 2006	0-14 2001-2006	15-64 2001-2006	65+ 2001-2006
PR	EU-27 (-UK)	17.81	65.96	16.23	16.16	66.60	17.25	-1.65	0.64	1.01
IN		16.98	67.30	15.72	15.77	67.47	16.76	-1.20	0.16	1.04
PU		15.64	68.59	15.77	15.13	67.95	16.92	-0.51	-0.64	1.15
PR	EU-15 (-UK)	16.81	64.97	18.22	15.82	64.89	19.29	-1.00	-0.08	1.08
IN		16.61	66.60	16.80	15.85	66.33	17.82	-0.75	-0.27	1.02
PU		15.78	68.27	15.95	15.39	67.50	17.11	-0.39	-0.77	1.16
PR	NMS-12	19.23	67.39	13.38	16.66	69.13	14.21	-2.57	1.74	0.83
IN		17.82	68.92	13.26	15.58	70.19	14.23	-2.24	1.27	0.97
PU		14.41	71.36	14.23	12.78	72.03	15.19	-1.63	0.67	0.96

\*TOA: type of area (PR = predominantly rural, IN = intermediate or PU = predominantly urban)

Source: Eurostat ([reg\\_pjanagegr3](#))

## Ageing continues and is more pronounced in urban areas

As can be seen from the last column of table 6, the share of those aged 65 and over increased in almost all Member States (except Spain) or remained on a similar level (Ireland, Sweden).

The absolute increase of the number of people aged 65 and over of almost 6 million (table 1) is unevenly distributed amongst the Member States (table 3a and figure 1). Only 9 mainly old Member States account for more than 90% of this increase.

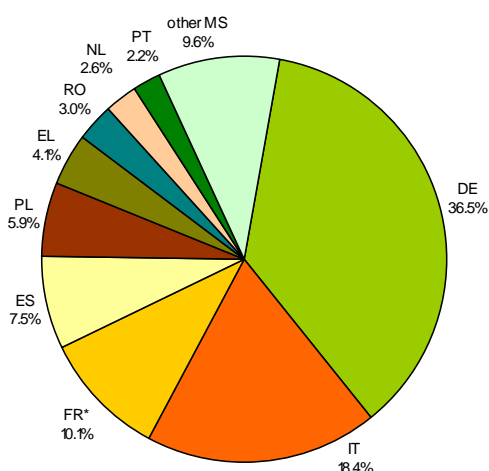
**Table 3a: Population share 2006 and distribution of the increase of population aged 65 and over by Member State, 2001-2006**

Member State	Share of (in %)	
	EU-27 (-UK) population 2006	Increase of population aged 65 and over 2001-2006
DE	19.1	36.5
FR*	14.2	10.1
IT	13.6	18.4
ES	10.4	7.5
PL	8.8	5.9
RO	5.0	3.0
NL	3.8	2.6
EL	2.6	4.1
PT	2.4	2.2
remaining	20.1	9.6

\* FR: excluding overseas territories

Source: Eurostat ([req\\_pjanageqr3](#))

**Figure 1: Distribution of the increase of population aged 65 and over by Member State, 2001-2006**



\* FR: excluding overseas territories

Source: Eurostat ([req\\_pjanageqr3](#))

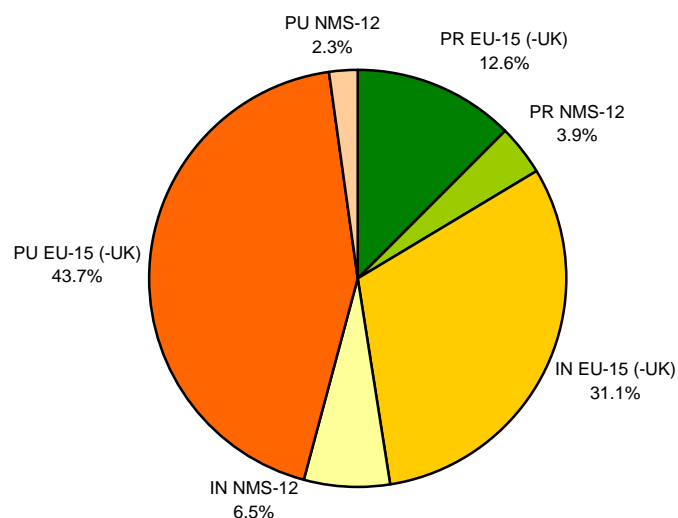
Table 3b and figure 2 show that 46% of this increase can be attributed to urban areas, in which in 2006 40% of the EU-27 (-UK) population lived, and only 16.5% to rural areas, which was the home of 21.4% of the EU-27 (-UK) population.

**Table 3b: Population share 2006 and distribution of the increase of population aged 65 and over by type of area, 2001-2006**

Aggregate	Share of (in %)	
	EU-27 (-UK) population 2006	Increase of population aged 65 and over 2001-2006
PR EU-15 (-UK)	12.8	12.6
PR NMS-12	8.6	3.9
IN EU-15 (-UK)	27.0	31.1
IN NMS-12	11.3	6.5
PU EU-15 (-UK)	36.3	43.7
PU NMS-12	4.0	2.3

Source: Eurostat ([req\\_pjanageqr3](#))

**Figure 2: Distribution of the increase of population aged 65 and over by type of area, 2001-2006**



Source: Eurostat ([req\\_pjanageqr3](#))

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## Specific effects are visible

As maps 1 – 4 show, the population of **Spain** grew significantly from 2001 to 2006, and in particular the NUTS3 areas in the north east and along the Mediterranean coast have shown high growth rates. This is visible in all three age groups and mainly due to immigration.

The south and the west of **France** also show considerable population growth. The two most probable factors involved are the relatively high fertility rates in France during recent years and immigration.

Also, in Northern **Italy**, a remarkable population growth rate can be observed, which can also be attributed to immigration rather than to an increase in fertility.

Although population growth in **Ireland** is almost a tradition, the growth observed has also to an extent been influenced by immigration boosted by the good economical evolution at the beginning of the millennium.

On the other hand, most of the **NMS-12** have lost a considerable percentage of their population within the observed period. This phenomenon appears especially in **Bulgaria** (map 1), where the population decreased by more than 5% overall, with rural areas having lost more than 10%. Most significant is the fact that in many of these countries the percentage of children diminished considerably (up to 17%).

While in most **old Member States** the 65 years and over group grew a lot – by almost 10% – the same group did not grow to that extent in the NMS (map 4), although the observed differences are huge (>17% in Cyprus, >12% in Malta, - 0.2% in Bulgaria).

In rural areas of **Bulgaria**, the oldest age group diminished by more than 4%. This means that more people left this age group (most probably they died) than those who entered it from the working age population. This is a unique phenomenon for the European Union.

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## East-west contrast observed in Germany

Germany is a special case because within the country there is a clearly visible east west divide. While most of the NUTS3 areas in the east lost population to a big extent – only Berlin and its surroundings seem to form an island of growth - the south and the north west of the country

gained. The most alarming fact for the demographic future of the eastern German NUTS3 areas – including Berlin and surroundings - is the evolution of the youngest age group, which decreased in some NUTS3 areas by more than 30% (map 2 and table 8).

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## North-south contrast observed in Italy

In Italy, as in Germany, there was a clear geographical divide but this time on a north south basis, the population of the north

increasing while that of the south decreased. However, this divide is by far less significant than that of Germany.

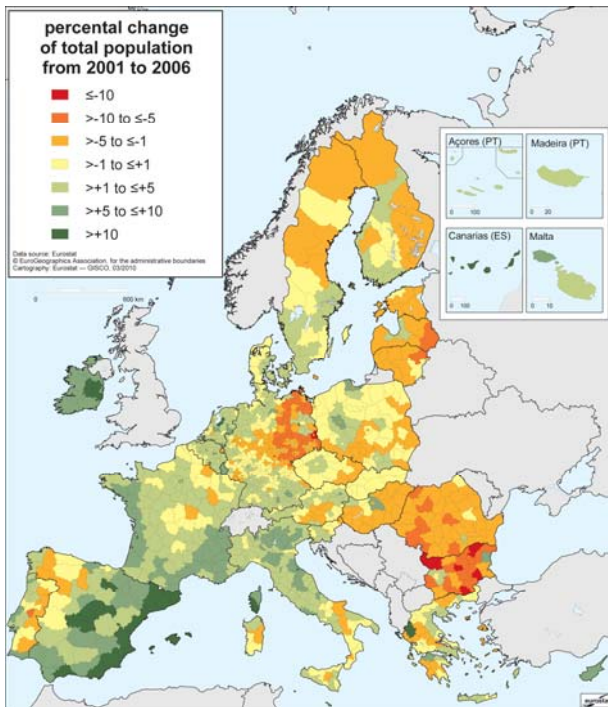
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## European champion for the increase of the population aged 65 and over is Germany

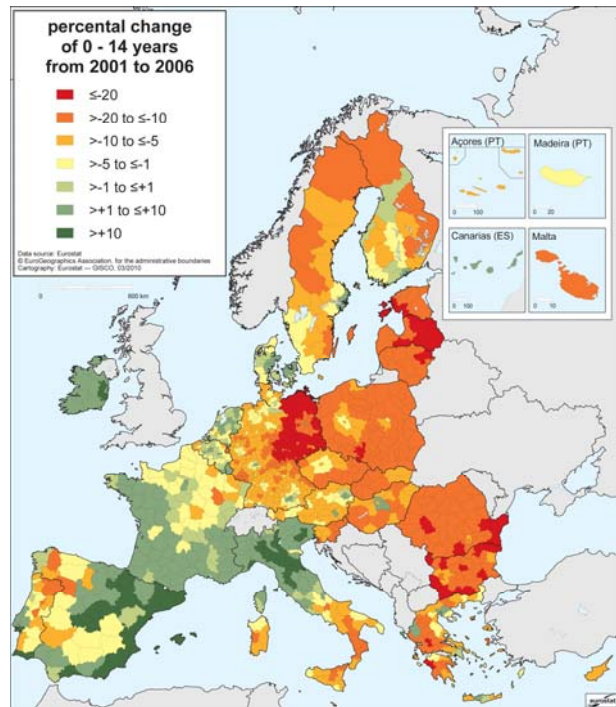
Map 4 shows that a common feature of the demographic development in Germany is the high increase of the oldest age group which is not limited only to the east, but also covers big parts of the territory of former West Germany.

No other Member State is affected by this evolution to that extent. Only in Northern Greece is a similar concentration of ageing NUTS3 areas visible. This evolution is also reflected in tables 3a, 6 and 9.

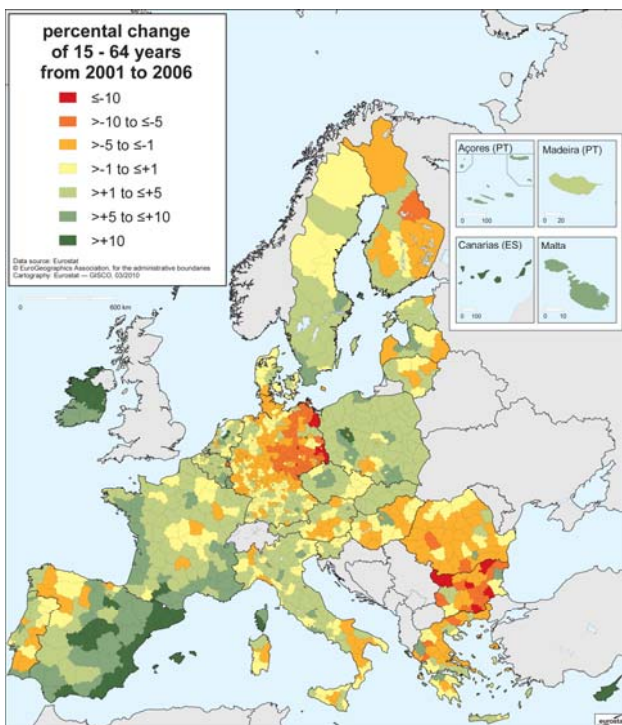
**Map 1: Development of the EU\* population from 2001 to 2006**



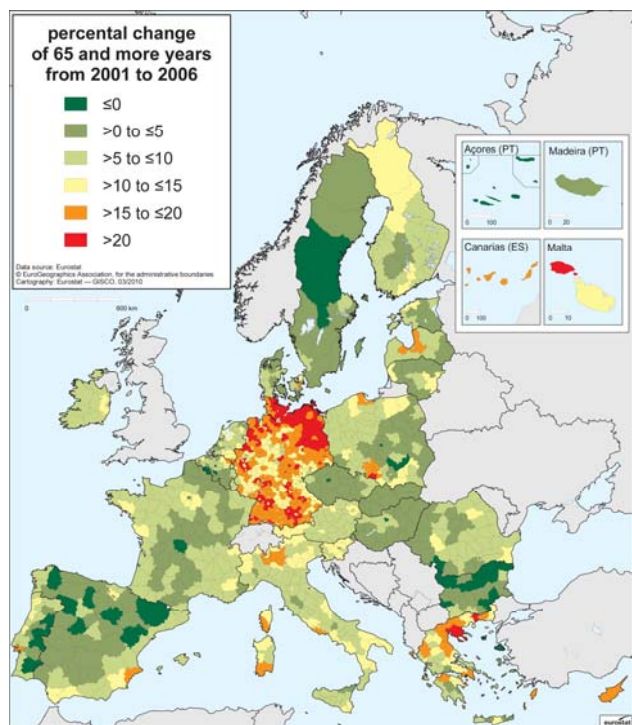
**Map 2: Development of the EU\* population aged 0 – 14 from 2001 to 2006**



**Map 3: Development of the EU\* population aged 15 – 64 from 2001 to 2006**



**Map 4: Development of the EU\* population aged 65 and over from 2001 to 2006**



\*Data for UK not available

Source: Eurostat

## Cluster analysis

A cluster analysis has been performed to detect NUTS3 areas behaving in a similar way as regards the relative changes from 2001 to 2006 of the three observed age groups. According to this analysis, the NUTS3 areas can be grouped in 5 clusters. A common feature to all clusters is that the 65 years and over group grew in (almost) all NUTS3 areas. The only difference is the extent to which they grew. Map 5 shows the location of the different clusters. For better orientation, map 6 illustrates the distribution of the rural, intermediate and urban areas in the European Union.

**Cluster 1** is described by an average growth of the oldest age group of about 9% and a considerable average increase (>6%) in the 15-64 years age group. It is the only cluster showing an average increase in the youngest age group (>8%). This cluster consists of 144 NUTS3 areas, mainly situated in Ireland, Italy, France and Spain.

**Cluster 2** shows an average increase in the oldest age group of 5.7% and a small average increase in the 15-64 years age group of almost 2%. The youngest age group shows a slight average decrease (-2.3%). Of the 302 NUTS3 areas of this cluster, the majority are located in France, Italy, Spain, Portugal, Belgium, the Netherlands, south of Sweden and south and west of Finland.

**Cluster 3** shows a high average increase in the oldest age group of about 16%, an almost stable 15-64 years age group (average decrease -0,2%) and a clear average decrease in the youngest age group (-7%). This is the biggest cluster containing 363 NUTS3 areas. It is dominated by German NUTS3 areas (282 NUTS3 areas). The northern part of Greece, Malta and Cyprus also belong to this cluster.

**Cluster 4** is the one with the lowest average increase in the oldest age group (4.8%) and a slightly average decrease (>-1%) in the 15-64 years age group. It also shows the second highest average decrease in the youngest age group (-14.5%). This cluster consists of 249 NUTS3 areas. With the exception of Slovenia, all eastern Member States are represented in this group with the majority of their NUTS3 areas.

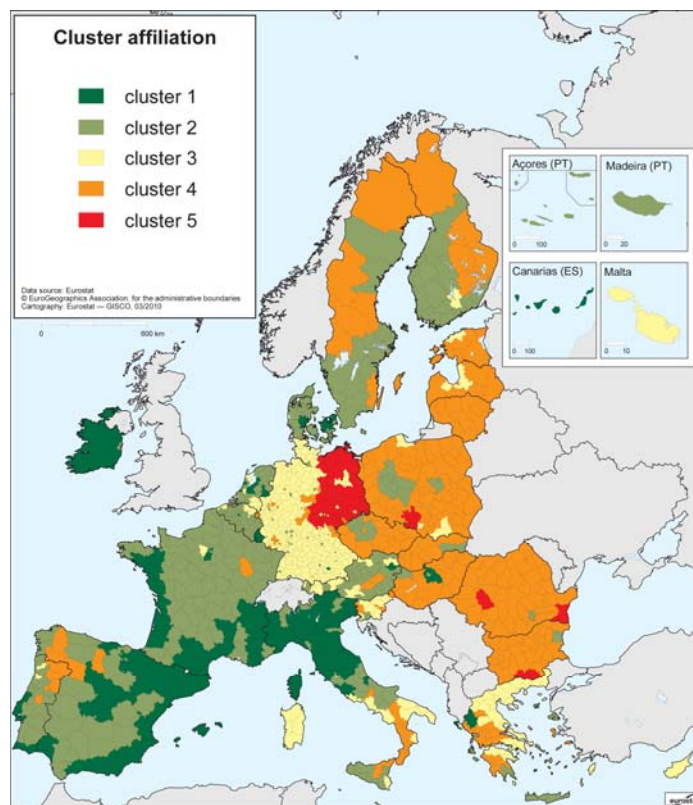
**Cluster 5** represents the NUTS3 areas with the highest average increase in the oldest age group (almost 19%), and the highest average decrease in the 15-64 years and the youngest age group (-6.8% and -25.6% resp.). With 100 NUTS3 areas, this is the smallest cluster, which is heavily dominated by German NUTS3 areas (more than 90%).

**Table 4: Characteristics of the 5 clusters**

Cluster	No. of NUTS 3 areas	Average change from 2001 to 2006 (in %)		
		0-14 y	15-64 y	65+ y
1	144	8.2	6.2	8.9
2	302	-2.3	1.7	5.7
3	363	-7.0	-0.2	16.1
4	249	-14.5	-1.2	4.8
5	100	-25.6	-6.8	18.8

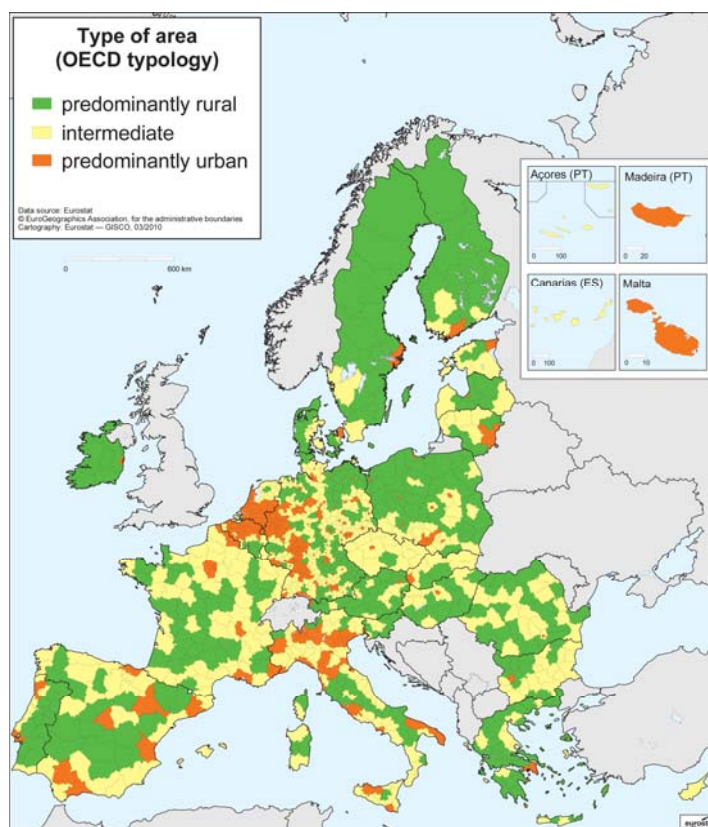
Source: Eurostat

**Map 5: Results of the cluster analysis**



\*Data for UK not available

**Map 6: Distribution of rural, intermediate and urban areas in the European Union**



\*Data for UK not available

## Analysis of variance with post hoc analysis

With the aim of finding out if the level of rurality (type of area) in the different clusters is an influencing factor on the changes in population shares of the three age groups from 2001 to 2006, an analysis of variance with two factors (the clusters described, type of area) and subsequent post hoc analysis was carried out (more details in the methodological notes).

Comparing rural with urban NUTS3 areas reveals statistically significant differences for the 0-14 years, 15-64 years and partially for the 65 years and over age groups (table 5).

For the **youngest age group**, urban areas show a higher increase (cluster 1) or a lower decline in change of the share (clusters 2-5) when compared with rural areas.

For the **population in working age (15-64 years age group)** the situation is the reverse: rural areas show either a bigger increase in the share of this age group (clusters 1, 2, 4) or a smaller decline (cluster 3, 5) when compared with urban areas.

For the **oldest age group** urban areas show a higher increase (clusters 1, 4) of their share when compared with rural areas. For the remaining clusters (clusters 2, 3, 5) no significant differences were detectable.

Intermediate areas behave indifferently: sometimes they show significant differences compared to urban areas and sometimes compared to rural areas.

**Table 5: Results of the analysis of variance with post hoc analysis**

cluster	0-14 years rural versus urban	15-64 years rural versus urban	65+ years rural versus urban
1	significantly lower	significantly higher	significantly lower
2	significantly lower	significantly higher	not significant
3	significantly lower	significantly higher	not significant
4	significantly lower	significantly higher	significantly lower
5	significantly lower	significantly higher	not significant

Source: Eurostat



**Table 6: Population changes in percent from 2001-2006, by aggregate, Member State and TOA\* and the share of the population aged 65 and over 2001 and 2006**

Aggregate/ Member State	TOA*	No. of NUTS 3 areas	% change from 2001 to 2006				Share of population aged 65+ (%)	
			tot. pop.	0-14 y	15-64 y	65+ y	2001	2006
EU-27 (-UK)	total	1158	1.9	-4.4	1.9	8.9	15.9	16.9
	PR	392	0.3	-9.0	1.2	6.5	16.2	17.2
	IN	430	2.0	-5.2	2.3	8.8	15.7	16.8
	PU	336	2.8	-0.6	1.8	10.3	15.8	16.9
EU-15 (-UK)	total	944	3.0	-0.9	2.3	9.8	16.6	17.7
	PR	294	1.6	-4.5	1.4	7.6	18.2	19.3
	IN	336	3.5	-1.2	3.1	9.8	16.8	17.8
	PU	314	3.2	0.7	2.1	10.8	15.9	17.1
NMS-12	total	214	-1.4	-14.0	0.5	5.3	13.5	14.4
	PR	98	-1.6	-14.7	1.0	4.6	13.4	14.2
	IN	94	-1.4	-13.8	0.5	5.9	13.3	14.2
	PU	22	-1.3	-12.5	-0.3	5.4	14.2	15.2
BE	national	43	2.4	-0.5	2.6	4.6	16.9	17.2
	PR	6	3.2	-1.7	4.7	3.2	16.6	16.6
	IN	10	2.5	-1.9	3.5	3.5	16.8	17.0
	PU	27	2.4	-0.2	2.5	4.8	16.9	17.3
BG	national	28	-5.3	-17.3	-3.8	-0.2	16.3	17.2
	PR	11	-10.0	-21.1	-8.9	-4.1	17.9	19.1
	IN	16	-4.7	-16.9	-3.3	1.2	16.1	17.1
	PU	1	0.8	-11.5	2.8	2.3	14.6	14.8
CZ	national	14	-0.2	-9.8	1.6	2.4	13.9	14.2
	PR	1	-0.6	-11.7	1.3	4.0	13.8	14.4
	IN	12	-0.2	-9.8	1.4	3.4	13.5	14.0
	PU	1	0.0	-9.0	2.8	-4.3	16.3	15.6
DK	national	15	1.5	2.2	0.7	3.9	14.8	15.2
	PR	8	0.7	-0.4	0.1	4.5	15.7	16.2
	IN	4	2.8	3.7	1.7	6.7	14.0	14.5
	PU	3	1.1	4.0	0.5	0.3	14.5	14.4
DE	national	429	0.2	-8.8	-1.6	15.9	16.6	19.3
	PR	89	-1.1	-13.1	-2.5	17.0	16.4	19.4
	IN	151	-0.2	-10.6	-2.0	17.3	16.5	19.4
	PU	189	0.7	-6.8	-1.1	14.9	16.8	19.1
EE	national	5	-1.6	-16.5	0.1	8.4	15.2	16.7
	PR	1	-1.9	-19.4	2.2	4.0	15.5	16.4
	IN	3	-1.3	-15.6	0.2	8.8	15.0	16.5
	PU	1	-3.4	-19.3	-2.7	9.6	16.0	18.2
IE	national	8	8.2	4.5	9.6	7.3	11.1	11.0
	PR	7	9.2	5.7	10.8	7.3	11.5	11.3
	PU	1	5.7	1.1	6.7	7.5	10.2	10.3
EL	national	51	2.2	-3.9	0.8	13.5	16.7	18.6
	PR	37	-0.4	-9.4	-1.4	10.3	19.3	21.4
	IN	13	4.0	-1.7	2.4	16.8	15.6	17.6
	PU	1	3.5	0.6	1.7	15.4	14.8	16.5
ES	national	52	8.8	9.1	9.3	6.4	17.1	16.7
	PR	17	4.0	-0.4	6.0	1.1	21.7	21.1
	IN	25	9.5	8.1	10.3	7.4	16.8	16.5
	PU	10	9.5	12.9	9.2	7.5	16.0	15.7
FR**	national	96	3.6	0.9	3.7	6.3	16.1	16.6
	PR	36	3.2	0.9	3.1	5.4	20.3	20.8
	IN	49	3.9	0.6	4.0	7.0	16.1	16.6
	PU	11	3.4	1.2	3.6	5.6	13.6	13.9

\*TOA: type of area (PR = predominately rural, IN = intermediate or PU = predominantly urban)

\*\* FR: excluding overseas territories

Areas with a 65+ share above 20% are highlighted

Source: Eurostat ([req\\_pianageqr3](#))

Table 6: continued

Aggregate/ Member State	TOA*	No. of NUTS 3 areas	% change from 2001 to 2006				Share of population aged 65+ (%)	
			tot. pop.	0-14 y	15-64 y	65+ y	2001	2006
IT	national	103	3.1	2.0	1.4	10.4	18.4	19.7
	PR	19	1.7	-2.9	0.9	7.7	19.8	20.9
	IN	50	2.6	-0.7	1.5	9.0	19.0	20.2
	PU	34	3.8	4.8	1.4	12.0	17.8	19.2
CY	national	1	9.9	-9.2	15.0	17.4	11.3	12.1
LV	national	6	-3.0	-19.8	-0.9	7.0	15.2	16.8
	PR	3	-0.8	-19.6	2.3	9.8	14.3	15.8
	IN	2	-4.8	-22.0	-2.1	4.0	15.6	17.0
	PU	1	-3.8	-17.5	-3.5	6.8	16.1	17.8
LT	national	10	-2.4	-18.4	0.5	6.2	14.1	15.3
	PR	4	-3.7	-20.1	0.1	2.1	16.0	16.9
	IN	5	-2.9	-18.5	0.0	6.3	14.0	15.3
	PU	1	-0.3	-16.6	2.0	10.0	12.9	14.2
LU	national	1	6.9	4.1	7.3	8.3	13.9	14.1
HU	national	20	-1.2	-8.2	-0.4	3.0	15.1	15.8
	PR	11	-2.2	-10.6	-1.2	2.8	15.1	15.9
	IN	8	0.8	-6.2	1.5	5.6	14.0	14.7
	PU	1	-3.5	-7.0	-3.3	-1.7	17.8	18.1
MT	national	2	3.3	-10.4	5.6	12.7	12.3	13.4
NL	national	40	2.2	0.2	1.7	7.2	13.6	14.3
	PR	1	2.1	0.3	1.3	8.1	15.3	16.1
	IN	12	3.3	1.5	3.1	6.9	13.9	14.4
	PU	27	2.0	0.0	1.5	7.2	13.5	14.2
AT	national	35	2.4	-2.5	2.1	8.7	15.5	16.4
	PR	25	1.0	-5.6	0.8	9.3	15.5	16.8
	IN	8	2.6	-1.5	2.1	9.3	15.6	16.6
	PU	2	5.2	4.7	5.2	5.5	15.8	15.8
PL	national	66	-0.1	-13.9	2.3	7.4	12.4	13.3
	PR	34	0.4	-14.0	3.8	5.9	11.8	12.5
	IN	20	-0.1	-14.8	2.3	8.0	12.4	13.4
	PU	12	-1.0	-12.0	-0.7	9.5	13.4	14.9
PT	national	30	3.1	0.2	2.5	7.9	16.4	17.1
	PR	15	0.0	-5.7	0.3	2.7	22.1	22.7
	IN	8	4.0	-0.9	4.3	8.0	16.1	16.7
	PU	7	3.8	2.9	2.5	11.3	14.1	15.1
RO	national	42	-3.7	-17.0	-2.0	6.0	13.5	14.8
	PR	23	-3.4	-16.8	-1.4	5.3	14.2	15.5
	IN	18	-3.9	-17.1	-2.6	7.5	12.8	14.3
	PU	1	-3.3	-17.8	-1.6	1.7	13.8	14.5
SI	national	12	0.7	-9.6	0.9	11.2	14.1	15.6
	PR	8	0.0	-10.8	0.5	9.3	14.2	15.5
	IN	4	1.6	-8.1	1.3	13.8	14.0	15.7
SK	national	8	0.2	-11.2	2.7	3.3	11.4	11.7
	PR	2	-0.6	-12.1	1.8	2.2	12.3	12.7
	IN	5	0.4	-10.8	3.1	3.9	10.9	11.3
	PU	1	0.8	-11.6	3.0	2.7	12.0	12.2
FI	national	20	1.4	-3.1	1.2	8.2	15.0	16.0
	PR	16	0.5	-4.6	0.1	7.9	16.0	17.2
	IN	3	0.5	-3.7	0.3	6.0	16.9	17.8
	PU	1	4.2	0.5	4.0	11.5	11.4	12.2
SE	national	21	1.9	-4.3	3.5	2.3	17.2	17.3
	PR	18	0.6	-7.1	2.3	2.2	18.4	18.7
	IN	2	2.8	-3.9	5.0	2.1	17.4	17.3
	PU	1	3.7	1.8	4.3	2.9	14.2	14.1

\*TOA: type of area (PR = predominately rural, IN = intermediate or PU = predominantly urban)

Areas with a 65+ share above 20% are highlighted

Source: Eurostat ([reg\\_pjanageqr3](#))

## Extreme changes

To illustrate how varied the situation in different NUTS3 areas can be, the following tables display extreme values for the percentage change of total population for the three age groups.

Table 7 shows the situation for the NUTS3 areas which increased or decreased the most. Not surprisingly, the list with the highest population gains is dominated by Spanish and Irish NUTS3 areas. The other extreme is dominated by Bulgarian and German NUTS3 areas. As map 1

already shows, the German NUTS3 areas in table 7 are exclusively situated in former East Germany.

A more in-depth analysis would be necessary in order to find out which age group mainly left the NUTS3 area. Very often, it is the working age group looking for employment. This age group also takes along their children (0–14 years of age) and as a result the oldest age group is left behind. This explains partly that in these NUTS3 areas their share in percent in the total population rises.

**Table 7: 20 NUTS3 areas with highest increase/decrease of the total population, 2001 - 2006**

NUTS3 code	Name	TOA*	Increase in %	NUTS3 code	Name	TOA*	Decrease in %
ES424	Guadalajara	IN	24.5	BG425	Kardzhali	PR	-21.3
ES521	Alicante	IN	19.7	BG313	Vratsa	PR	-17.4
ES514	Tarragona	IN	19.3	BG324	Razgrad	PR	-15.2
ES611	Almeria	IN	19.3	DED23	Hoyerswerda	PU	-15.1
ES512	Girona	IN	18.6	BG311	Vidin	PR	-13.5
ES522	Castellón	IN	15.4	BG343	Yambol	IN	-12.2
IE022	Mid-East	PR	15.2	BG325	Silistra	PR	-11.7
ES620	Murcia	IN	15.1	DE411	Frankfurt/Oder	PU	-11.6
ES425	Toledo	PR	14.8	BG312	Montana	PR	-11.5
ES617	Málaga	PU	14.5	DEG04	Suhl	PU	-11.1
ES530	Islas Baleares	IN	14.5	DE429	Spree-Neiße	IN	-11.0
DE423	Potsdam	PU	14.1	BG322	Gabrovo	IN	-10.9
ES702	Santa Cruz de Tenerife	IN	13.4	BG415	Kyustendil	IN	-9.6
ES230	La Rioja	IN	13.3	NL333	Delft en Westland	PU	-9.4
GR222	Kerkyra	IN	12.9	BG424	Smolyan	PR	-9.4
NL230	Flevoland	IN	12.7	DE801	Uecker-Randow	PR	-9.3
ES300	Madrid	PU	11.8	DE427	Oberspreewald-Lausitz	IN	-9.0
IE012	Midland	PR	11.7	DED26	Bautzen	PR	-8.8
ES513	Lleida	PR	11.6	BG315	Lovech	PR	-8.7
ES701	Las Palmas	IN	10.8	BG332	Dobrich	IN	-8.5

\* TOA: type of area (PR = predominantly rural, IN = intermediate or PU = predominantly urban)

Source: Eurostat ([reg\\_pjanageqr3](#))

Tables 8 – 10 explain the changes visible in table 7. Due to the bigger absolute number of people in the working age group, it takes many more people to move in or to leave a given NUTS3 area to generate e.g. a 15% change in this age group than in the youngest or the oldest age group. This can be illustrated using the example of La Rioja (ES230):

Total population change from 2001 – 2006 was 35 977 persons (+13.3%). The change in the 0-14 years group was 6 639 persons (+19.6%), in the 15-64 years group 26 906 (+14.7%) and in the group of 65 years and over 2 432 (+4.5%). In the case of La Rioja this had the following consequences on the shares of the three age groups in the total population (in percentage

points): 0-14 years +0.7, 15-64 years +0.9, 65 years and over -1.6.

Another example is Potsdam (DE423), the only German NUTS3 area belonging to the top 20 growing NUTS3 areas. Although the total population growth was 18 259 persons (+14.1%), a closer look at the different age groups reveals that it is mainly due to the growth of the working age group and the old age group: the 0-14 years group only grew by 712 persons (+4.5%), the 15-64 years group grew by 10 863 persons (+11.6%) and the old age group grew by 6 684 persons (+32.9%). The result for the share of the three age groups in the total population (in percentage points) is: 0-14 years -1.0, 15-64 years -1.6, 65 years and over +2.6. The value of +2.6 percentage points illustrates ageing with a strong dynamic.

**Table 8: 20 NUTS3 areas with highest increase/decrease of the population aged 0-14, 2001 – 2006**

NUTS3 code	Name	TOA*	Increase in %	NUTS3 code	Name	TOA*	Decrease in %
ES424	Guadalajara	IN	32.8	DED23	Hoyerswerda	PU	-41.3
ES514	Tarragona	IN	25.2	DEG04	Suhl	PU	-37.8
ES512	Girona	IN	22.5	DE429	Spree-Neiße	IN	-34.6
ITD53	Reggio nell'Emilia	PU	20.8	DE411	Frankfurt/Oder	PU	-33.8
ES230	La Rioja	IN	19.6	DE80I	Uecker-Randow	PR	-33.2
ITD57	Ferrara	PU	18.7	DE427	Oberspreewald-Lausitz	IN	-32.8
ES522	Castellón	IN	17.6	BG425	Kardzhali	PR	-32.8
ES300	Madrid	PU	17.3	DE417	Prignitz	PR	-32.5
ES521	Alicante	IN	16.9	DE418	Uckermark	PR	-31.5
ES220	Navarra	IN	16.8	DE808	Demmin	PR	-31.1
ES511	Barcelona	PU	16.6	DE80H	Rügen	IN	-31.0
ES530	Islas Baleares	IN	15.9	DE80B	Mecklenburg-Strelitz	PR	-30.9
ITD55	Bologna	IN	15.5	DED26	Niederschlesischer Oberlausitzkreis	PR	-30.9
ES513	Lleida	PR	15.2	DE80G	Parchim	PR	-30.8
ES425	Toledo	PR	15.0	DE802	Neubrandenburg	PU	-30.4
ITD52	Parma	IN	14.6	DEG02	Gera	PU	-30.2
ES620	Murcia	IN	14.2	DEE0E	Wittenberg	PR	-30.1
ES523	Valencia	PU	13.5	DEE05	Anhalt-Bitterfeld	IN	-30.0
ITD54	Modena	PU	13.4	DE80D	Nordwestmecklenburg	PR	-29.9
ITD34	Treviso	PU	13.4	DEE01	Dessau-Roßlau	PU	-29.5

\* TOA: type of area (PR = predominantly rural, IN = intermediate or PU = predominantly urban)

Source: Eurostat ([reg\\_pjanagegr3](#))

**Table 9: 20 NUTS3 areas with highest increase/decrease of the population aged 15-64, 2001 – 2006**

NUTS3 code	Name	TOA*	Increase in %	NUTS3 code	Name	TOA*	Decrease in %
ES424	Guadalajara	IN	29.3	BG425	Kardzhali	PR	-22.1
ES611	Almeria	IN	23.3	DED23	Hoyerswerda	PU	-21.0
ES514	Tarragona	IN	21.0	BG313	Vratsa	PR	-15.5
ES521	Alicante	IN	20.7	DE411	Frankfurt/Oder	PU	-14.3
ES512	Girona	IN	20.7	DEG04	Suhl	PU	-14.1
ES425	Toledo	PR	18.1	BG324	Razgrad	PR	-14.0
ES522	Castellón	IN	17.6	DE429	Spree-Neiße	IN	-12.7
IE022	Mid-East	PR	16.5	BG343	Yambol	IN	-12.2
ES620	Murcia	IN	16.3	BG311	Vidin	PR	-11.8
ES530	Islas Baleares	IN	15.5	DE427	Oberspreewald-Lausitz	IN	-11.8
ES617	Málaga	PU	15.3	DEE01	Dessau-Roßlau	PU	-11.5
CY000	Cyprus	IN	15.0	BG322	Gabrovo	IN	-11.3
ES513	Lleida	PR	14.9	DE80I	Uecker-Randow	PR	-11.3
ES230	La Rioja	IN	14.7	BG325	Silistra	PR	-11.2
ES702	Santa Cruz de Tenerife	IN	14.5	DED26	Niederschlesischer Oberlausitzkreis	PR	-10.9
NL230	Flevoland	IN	14.2	DE418	Uckermark	PR	-10.4
IE012	Midland	PR	13.9	DEG02	Gera	PU	-10.3
GR222	Kerkyra	IN	13.5	DED28	Löbau-Zittau	IN	-10.3
DE423	Potsdam	PU	11.6	DED22	Görlitz	PU	-10.2
ES701	Las Palmas	IN	11.4	BG312	Montana	PR	-10.1

\* TOA: type of area (PR = predominantly rural, IN = intermediate or PU = predominantly urban)

Source: Eurostat ([reg\\_pjanagegr3](#))

**Table 10: 20 NUTS3 areas with highest increase/decrease of the population aged 65 and over, 2001 – 2006**

NUTS3 code	Name	TOA*	Increase in %	NUTS3 code	Name	TOA*	Decrease in %
DE412	Barnim	IN	33.3	BG313	Vratsa	PR	-15.9
DE802	Neubrandenburg	PU	33.2	DK001	København og Frederiksberg	PU	-12.6
DE423	Potsdam	PU	32.9	BG311	Vidin	PR	-12.4
DE426	Havelland	IN	31.2	BG312	Montana	PR	-10.5
DE807	Bad Doberan	PR	31.1	BG324	Razgrad	PR	-9.4
DE803	Rostock	PU	30.9	BG343	Yambol	IN	-5.0
DE414	Oberhavel	IN	30.3	BG321	Veliko Tarnovo	IN	-4.7
DE21C	Fürstfeldbruck	PU	29.7	BG315	Lovech	PR	-4.6
DED23	Hoyerswerda	PU	29.6	CZ010	Prague	PU	-4.3
DE424	Dahme-Spreewald	PR	29.1	PT166	Pinhal Interior Sul	PR	-4.2
DE21H	Landkreis München	PU	28.8	ES242	Teruel	PR	-3.8
DEF0D	Segeberg	IN	28.1	BG422	Haskovo	IN	-3.6
DE933	Harburg	IN	28.0	BE100	Brussels	PU	-3.1
DE42A	Teltow-Fläming	IN	27.4	BE323	Mons	PU	-3.1
DE218	Ebersberg	IN	27.4	BG323	Ruse	IN	-2.8
DE422	Cottbus	PU	27.3	PT182	Alto Alentejo	PR	-2.7
DE805	Stralsund	PU	27.1	BG333	Shumen	IN	-2.6
DE415	Oder-Spree	IN	27.1	SE322	Jämtland	PR	-2.5
DE413	Märkisch-Oderland	IN	27.0	ES414	Palencia	PR	-2.4
DEF0F	Stormarn	IN	26.2	ES417	Soria	PR	-2.4

\* TOA: type of area (PR = predominantly rural, IN = intermediate or PU = predominantly urban)

Source: Eurostat ([reg\\_pjanageqr3](#))

## Further work

Further analysis e.g. age dependency ratios, changes in the population composition and an attempt to quantify the importance of natural

population growth/decrease and migration will be carried out shortly and will be published in a separate publication.

## METHODOLOGICAL NOTES

### 1. Definition of rural areas according to the OECD typology

This definition distinguishes two hierarchical levels, local and regional. At the local level (LAU1/2) rural communities are defined as having a population density below 150 inhabitants per square kilometre.

At NUTS level 3 larger functional or administrative units are distinguished by their degree of rurality, depending on what share of the region's population lives in rural communities.

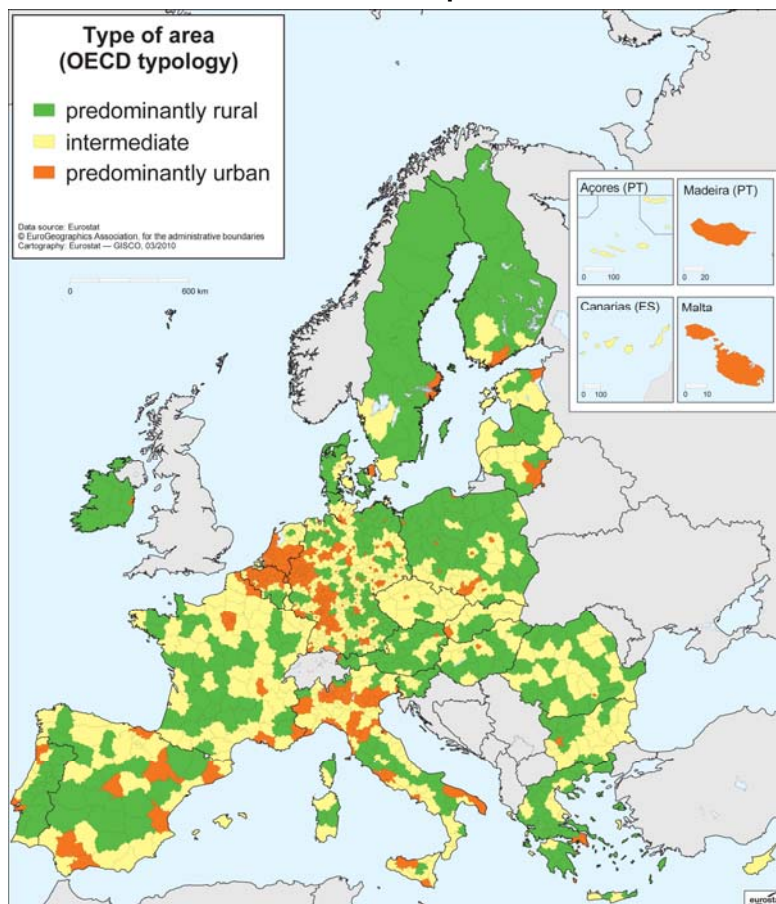
Three types of areas (TOA) are used:

- *Predominantly rural areas*: >50% of the population living in rural communities (PR).
- *Intermediate areas*: 15 – 50% of the population living in rural communities (IN).
- *Predominantly urban areas*: <15% of the population living in rural communities (PU).

Moreover, when a NUTS3 area includes a city with more than 200 000 inhabitants, the area is classified as intermediate. If an area includes a city with more than 500 000 inhabitants, the area is classified as urban.

The rural, intermediate and urban NUTS3 areas according to this typology are shown in Map 7.

**Map 7: Distribution of rural, intermediate and urban areas in the European Union**



## 2. Nomenclature of territorial units (NUTS):

The Nomenclature of Territorial Units for Statistics (NUTS) has been used since 1988 in EU legislation. The data presented in this publication is based on the NUTS2006 methodology ([Regulation No 105/2007 of 1 February 2007](#), OJ L 39, 10 February 2007 and [Regulation No 176/2008](#), OJ L 61, 5 March 2008). In certain cases – for comparability reasons – the NUTS2003 methodology was used ([Regulation No 1059/2003 of 26 May 2003](#), OJ L 154, 21 March 2003). The NUTS3 areas of the Member States are available on Eurostat's website.

The aggregate 'new Member States' includes the following 12 countries: Bulgaria, Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia and Slovakia.

The 133 NUTS3 areas of the United Kingdom are not covered because data for 2006 were not available.

## 3. Abbreviations used

European Union of 27 Member States: Belgium (BE), Bulgaria (BG), the Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (EL, GR in the tables referring to the NUTS classification), Spain (ES), Metropolitan France (FR\*), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), the Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), Sweden (SE) and the United Kingdom (UK).

EU-aggregates: EU-27 (-UK) = EU-27 without UK, EU-15 (-UK) = EU-15 without UK = old Member States without UK, NMS-12 = 12 new Member States (Member States which joined the EU on 1 May 2004 and 1 January 2007).

## 4. Data and sources used

For most of the 26 Member States appearing in this comparison, population figures of 1 January 2001 and 1 January 2006 were used. Exceptions are: Ireland – 28 April 2002 and 23 April 2006, Slovakia – 1 January 2002, Greece – 18 March 2001 and 1 January 2007.

The data used have been downloaded from the websites of the National Statistical Institutes of AT, BE, CY, DE, DK, EE, ES, FI, IE, IT, LT, LU, NL, PL, PT, SE, SI, SK of the MS or have been provided to Eurostat by Member States BG, CZ, FR, EL, HU, LV, MT, RO.

## 5. Cluster analysis

Best information criteria procedure was carried out to determine the optimal number of clusters. Afterwards, the procedure k-means was applied with single linkage Euclidian distance.

Input variables: relative changes within each of the three age groups from 2001 to 2006 in percent.

## 6. Analysis of variance with post hoc analysis

Analysis of variance with two factors (cluster membership, the level of rurality) was carried out. The dependent variables were: change in the share of the three age groups in the total population of each NUTS3 area within each cluster from 2001 to 2006 in percentage points. Post hoc analysis was conducted to identify within each cluster if significant differences in population dynamics exist among the different types of areas.

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## Further information

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Eurostat Website: <http://ec.europa.eu/eurostat>

Data on "Regional statistics"

[http://epp.eurostat.ec.europa.eu/portal/page/portal/region\\_cities/regional\\_statistics/data/database](http://epp.eurostat.ec.europa.eu/portal/page/portal/region_cities/regional_statistics/data/database)

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More information about "Regional statistics"

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