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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.

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.

This publication presents the population changes for 1158 NUTS[1] 3 areas of 26 Member States (no data available for the United Kingdom[2]) for the period from 2001 to 2006 taking the level of rurality[3] 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.

[1] NUTS = nomenclature des unités territoriales statistiques = Nomenclature of Territorial Units for Statistics ; more details in the methodological notes

[2] No population registers in UK, therefore no data available outside census years.

[3] 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
EU-27 (-UK)	8 217 047	-3 075 049	5 330 939	5 961 157
	(+1.9)	(-4.4)	(+1.9)	(+8.9)
EU-15 (-UK)	9 708 045	-473 689	4 972 546	5 209 188
	(+3.0)	(-0.9)	(+2.3)	(+9.8)
NMS-12*	-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[4]). 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.

[4] *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

		Composition 2001 (%)			Composition 2006 (%)			Change in composition (%points)		
TOA*	Aggregate	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		17.81	65.96	16.23	16.16	66.60	17.25	-1.65	0.64	1.01
IN	EU-27 (-UK)	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		16.81	64.97	18.22	15.82	64.89	19.29	-1.00	-0.08	1.08
IN	EU-15 (-UK)	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		19.23	67.39	13.38	16.66	69.13	14.21	-2.57	1.74	0.83
IN	NMS-12	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 = predominatly 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 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 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

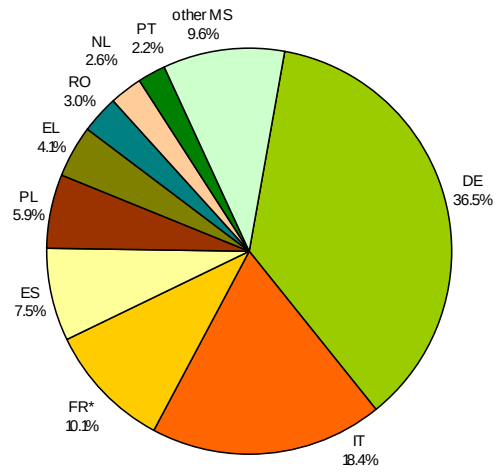
Source: Eurostat (reg_pjanagegr3)

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 (reg_pjanagegr3)

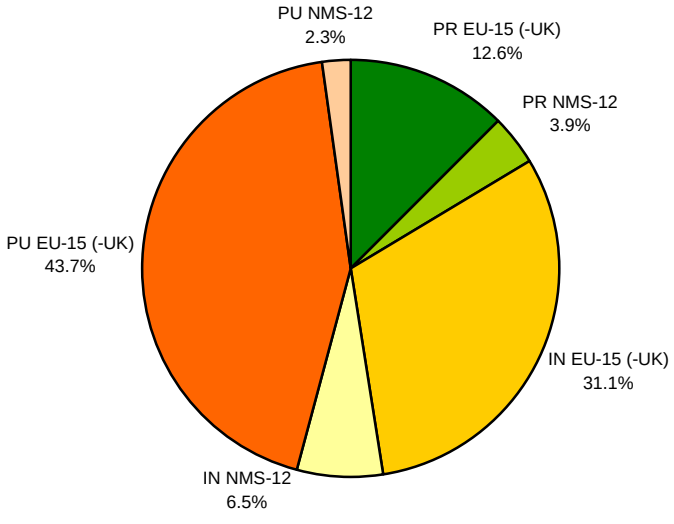
Figure 1: Distribution of the increase of population aged 65 and over by Member State, 2001-2006



* FR: excluding overseas territories

Source: Eurostat (reg_pjanagegr3)

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



Source: Eurostat (reg_pjanagegr3)

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.

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).

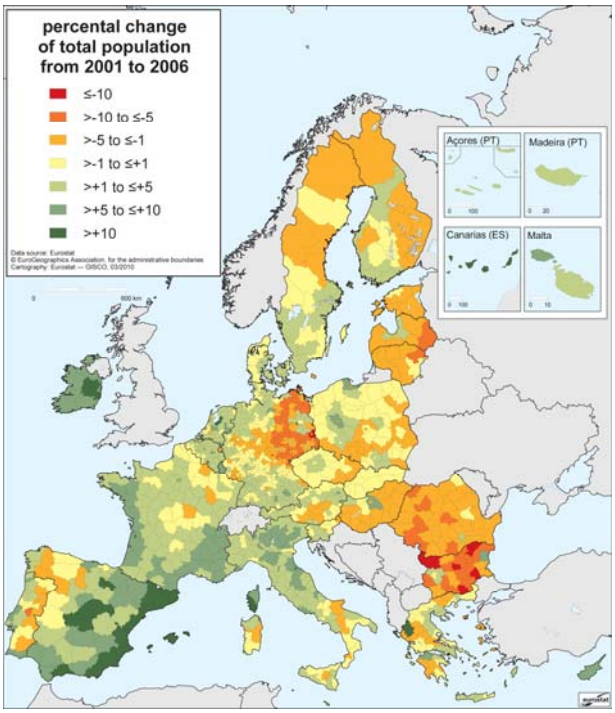
North-south contrast observed in Italy

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.

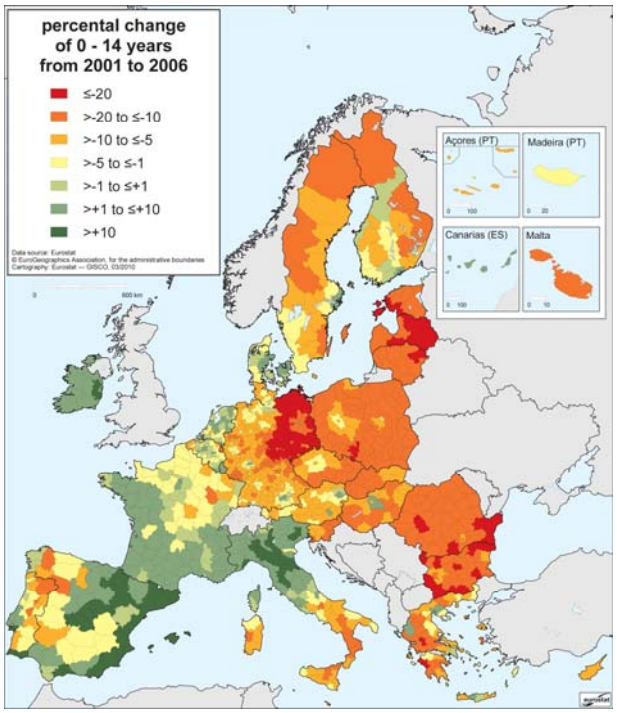
European champion for the increase of the population aged 65 and over is Germany

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.

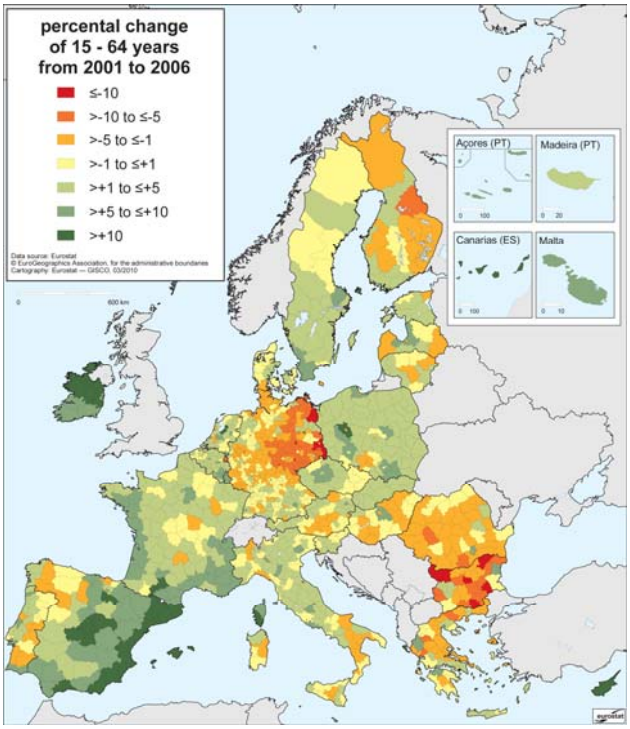
Map 1: Development of the EU* population from 2001 to 2006



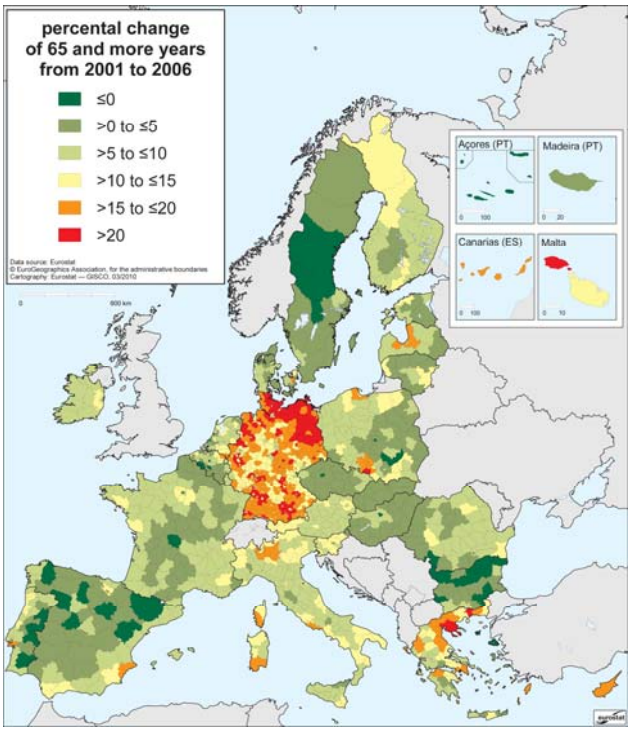
Map 2: Development of the EU* population aged 0 – 14 from 2001 to 2006



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.

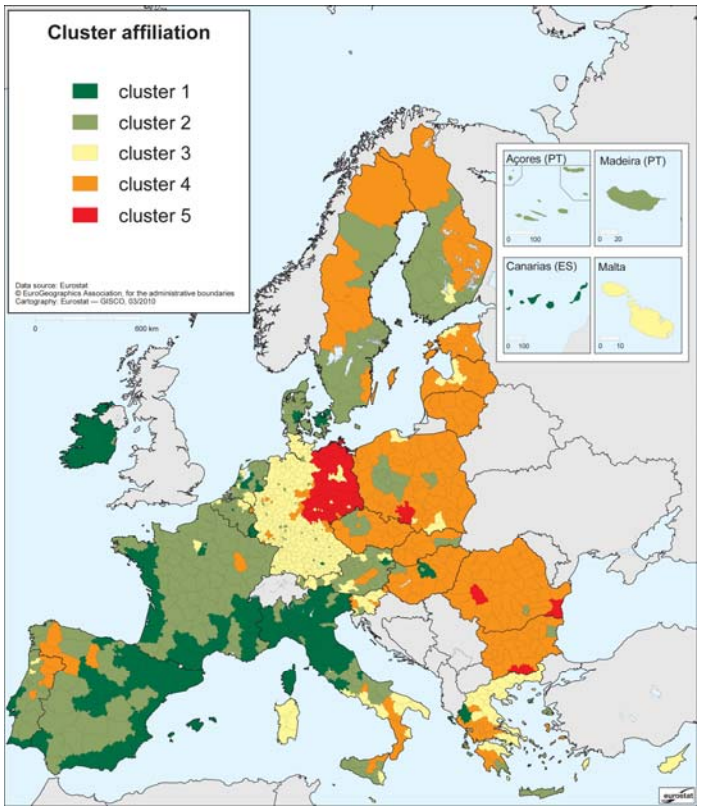
Cluster 5 represents the NUTS3 areas with the highest average increase in the oldest age group (almost 19%), and the highest average decrease in the 15-64 years and the youngest age group (-6.8% and -25.6% resp.). With 100 NUTS3 areas, this is the smallest cluster, which is heavily dominated by German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

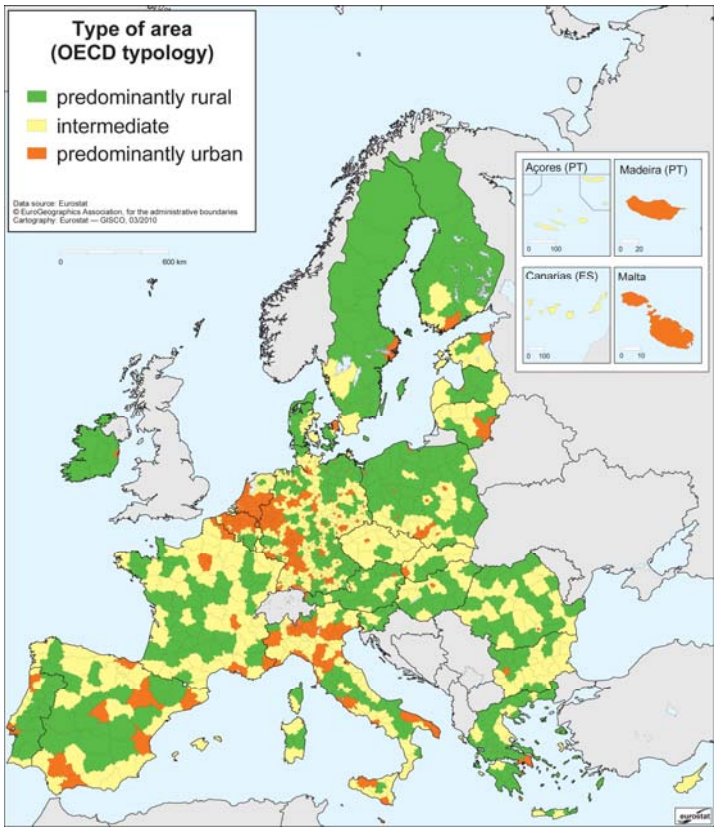
Source: Eurostat

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 = predominatly rural, IN = intermediate or PU = predominantly urban)
** FR: excluding overseas territories

Areas with a 65+ share above 20% are highlighted

Source: Eurostat (reg_pjanagegr3)

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 = predominatly rural, IN = intermediate or PU = predominantly urban)

Areas with a 65+ share above 20% are highlighted

Source: Eurostat (reg_pjanagegr3)

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	DE80I	**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 = predomiantly rural, IN = intermediate or PU = predominantly urban)

Source: Eurostat (reg_pjanagegr3)

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 = predomiantly 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 = predomiantly 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	**Fürstenfeldbruck**	**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 = predomiantly rural, IN = intermediate or PU = predominantly urban)

Source: Eurostat (reg_pjanagegr3)

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.

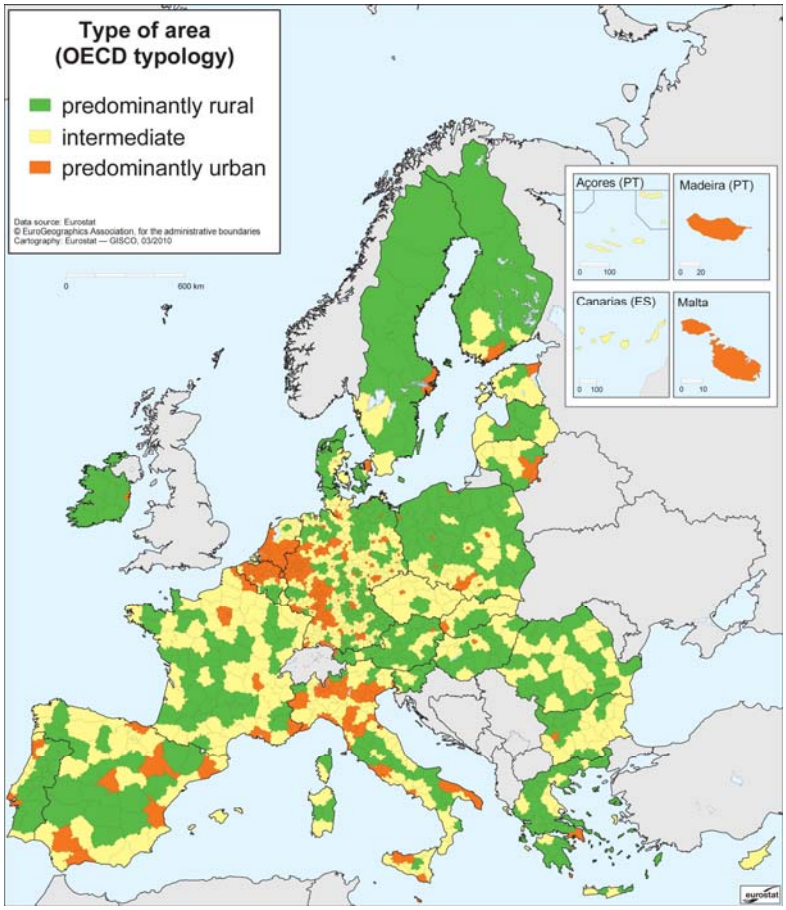
Three types of areas (TOA) are used:

- *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



*Data for UK not available

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

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
Select "Regional demographic statistics" and "population and area"

More information about "Regional statistics"
http://epp.eurostat.ec.europa.eu/portal/page/portal/region_cities/introduction

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