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**Reference scenarios**

Prepared by  
Marek Kupiszewski and Dorota Kupiszewska  
Central European Forum For Migration and Population Research,  
International Organization for Migration,



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## 1. Overview of the projection methodology and indicators

### 1.1 Simulations and status quo projections – concepts and terminology

There is a considerable confusion on the terminology used to label the output of population dynamics models (Kupiszewski, Bijak and Nowok, 2008). Full discussion of the terminology is beyond the scope of this report, however for the sake of clarity of communication we propose a certain coherent set of terms, following Kupiszewski (2002).

Typically we feed the population dynamics model with:

- Initial population, including its structure(s) – a minimum is population by age and sex, but the main limit in defining the initial structures of population is the availability of data.
- Benchmark rates of demographic events, usually at least birth rates, death rates and emigration rates, plus immigration numbers, all by age and sex.
- Assumed scenarios of change of the rates listed above.

How we call the results of the model depends on the characteristics of the scenarios of changes. The broadest category of the results is labelled the simulation of population. We will get it when we place no limits on the scenarios of change of the demographic rates. Simulations are very handy in what-if analysis. For example they allow for answering such questions as: what would the population of Germany look like in 50 years if there were no migration in future? Or how would increase in fertility rate to 2.1 in the coming 10 years and its stabilization thereafter, *ceteris paribus* other components, impact population numbers and structures. Or what would happen if 50% of all internal migrants in a country migrated to the capital city of this country? Obviously we may simulate even most improbable scenarios, such as, for example, the lack of international migration.

A very specific and perhaps the most popular simulation of population is the population forecast. This is such a simulation in which a researcher assumes the most likely, in his view, future changes of the rates of the demographic events. We may also conduct a population projection, that is such a simulation in which the demographic rates remain at the level observed at the start.

### 1.2 Three reference simulations

For the analytical purposes we prepared a projection of population and labour force and two simulations, all three covering the period of 45 years from 2005 until 2050. In the projection, further called the *Status quo* simulation or the *Status quo* scenario, all sex and age-specific rates characterising the intensity of demographic events as well as the labour force participation rates remain constant over the projection time on the level observed in 2005. The two other population simulations assume constant fertility, mortality and activity rates, the same as used in the projection, but different migration scenarios: the first one assuming there is no migration at all (the *No migration* simulation) and the other one, labelled the *No extra-Europe migration* simulation, assuming there is no international migration from the outside of the ESPON countries while internal and international migration within the ESPON space remain constant as in the *Status quo* simulation. Further on we will refer to these three simulations as the reference simulations or the reference scenarios.

The projection allows for the assessment of the consequences of retaining the existing patterns of mortality, fertility and migration over time. The two other simulations, compared with the *Status quo* simulation, allow for the assessment of the impact of all migration on population and labour force dynamics and for the assessment of the impact of international migration from the outside of the ESPON space. Moreover, the results of the reference scenarios can be used as a base to assess various regional and policy scenarios.

### 1.3 The MULTIPOLES projection model

The MULTIPOLES model (*MULTI*state *POP*ulation model for *multi*Level *S*ystems) used to produce the reference scenario simulations is a supranational multiregional hierarchical female-dominated cohort-component model. It allows for simultaneous projections and simulations of regional and national populations and labour forces by country, region, age and sex. A full specification of the model is given in Deliverable 4.

The model follows Rees' idea (Rees, Stillwell and Convey, 1992, Rees 1996) to handle migration on three levels: internal migration, international intra-system migration and international extra-system migration. Two former are handled using emigration rates, the latter – using emigration rates and immigration numbers, as rates for the “rest of the world” are impossible to estimate. Such structure is particularly suitable for the modelling of large population systems, for which data quality and availability varies substantially. The model has been developed by D. Kupiszewska and M. Kupiszewski in the School of Geography of the University of Leeds (Kupiszewski and Kupiszewska, 1998 ) and the Central European Forum for Migration and Population Research (Kupiszewska and Kupiszewski, 2005).

The model, developed since mid 1990s, has been substantially modified to meet the requirements of the DEMIFER project (see Deliverable 4). In DEMIFER, the MULTIPOLES option with twenty one 5-year age groups (the last half-open one is 100+) was used. The model requires the following data:

- population at the start of the projection (by region, sex and 5-year age groups up to 100+);
- mortality (mortality rates by region, sex and 5-year age group);
- fertility (fertility rates by region and 5-year age group 15-49);
- internal out-migration (rates by origin and destination region, sex and 5-year age group);
- emigration (rates by region, sex and 5-year age-group),
- percentage distribution of emigrants from each origin country among the destination countries (including the Rest of the world), by sex;
- distribution of immigrants arriving to each country from other countries of the system among the destination regions, by sex;
- annual number of immigrants from the Rest of the world arriving to each country;
- share of males among the immigrants from the Rest of the world, by destination country;
- age distribution of immigrants from the Rest of the world, by destination country and sex;
- distribution of immigrants arriving to each country from the Rest of the world among the destination regions, by sex;



- labour force participation rates by region, sex and 5-year age group (15-75+).

## 1.4 Indicators

In order to measure the impact of migration on population and labour force age structures, we proposed four indicators. The first one is the *old-age dependency ratio* (ODR). Two others: the *economic old-age dependency ratio* (EODR) and the *labour market dependency ratio* (LMDR) were defined and used previously in a study by Bijak et al. (2005). The fourth one, the *very old age dependency ratio* (VODR), was proposed to assess the burden of the potential long term care need on working population.

ODR is defined as the ratio of population aged 65 and more to population in the age group 15-64 years, multiplied by 100. This is a purely demographic indicator which gives us the number of individuals in the retirement age per 100 persons in the economic activity age. An increase of this indicator tells us that more elderly people will have to be supported by the same number of people in the economic activity age.

Demography itself is the fundamental driver of the dynamics of the labour markets. However, it does not take into account the other component – the labour force participation. Two measures that do take account of the economic activity of population are the *economic old-age dependency ratio* (EODR) and the *labour market dependency ratio* (LMDR). EODR is defined as the ratio of the economically inactive population at the retirement age (i.e. 65 years or more) to the whole active population aged 15 years or more, multiplied by 100 as in the case of ODR. This measure tells us about the burden of inactive pensioners on the entire working population, and may be suitable for the assessment of the sustainability of the pension systems. LMDR is defined as the ratio of the whole economically inactive population to the whole active population. This indicator shows the overall economic burden of the inactive population on the labour market. The LMDR value depends not only on the size of the retired population, but also on the labour market behaviour of the young people in educational institutions and those in working age, who may or may not be on the labour market.

Finally, *very old age dependency ratio* (VODR) is defined as the population at the age 75+ to total economically active population aged 15+. It gives us the proportion of population in the age when the needs for long term care increase to the total working population. Obviously it defines the potential demand rather than actual demand for care services.

## 2. Data, assumptions and estimates

Data collection and estimation was a very important part of the scenario development work, taking into account that the quality of the results of the projections is dependent on the quality of the input data. The majority of the data needed to produce the reference scenarios were collected from the Eurostat database<sup>1</sup>. The gaps were filled using the data provided on the websites of national statistical institutes (NSIs) or by contacting the NSIs directly. In the case of the labour force participation rates, data from the ILO database were used as well.

In order to tackle the problem of statistical variation of the values of the demographic rates and activity rates, we have averaged the data over several years, as indicated below (2003-2006 or 2004-2005). These averaged rates were assumed as the *status quo* values (kept constant in all the projection periods in the *Status quo* scenario).

### 2.1 Population

The starting point of the reference projections was 1 January 2005, therefore data on the population of all 287 NUTS2 regions on 1 January 2005 were needed, in disaggregation by sex and 5-year age group up to 100+. In addition, data on population on 1 January 2003-2007 were needed in order to estimate mid-year populations 2003-2006.

The procedure to prepare data on population by region, sex and 5-year age group (to 100+) for 1 January 2003-2007 was as follows. Data by region, sex and age as well as by country, sex and age were downloaded from the Eurostat database (from the two parts of the database). Missing and inconsistent data were identified. We have used a variety of methods to fill the gaps and remove inconsistencies. Additional data were collected from the websites of national statistical institutes and from the Human Mortality Database (HMD). The estimates for the UK were provided by P. Rees from the University of Leeds. An iterative proportional fitting procedure (IPF) was used for the cases where we had marginal totals and some initial indication of the regional distribution. Altogether, some corrective action was required for 20 out of 31 countries.

Mid-year populations in 2003, 2004, 2005 and 2006 were needed for the calculations of demographic rates and labour force participation rates. They were calculated using the estimates of population 1 January 2003-2007 described above, by taking the average of the populations at the beginning and at the end of the year.

### 2.2 Mortality

The input data concerning the mortality component are defined in the MULTIPOLES model in terms of annual mortality rates (per 1000) by sex, for all regions and 5-year age groups (up to 100+, based on the age at the last birthday), for all the projection periods. We have downloaded the relevant data from the Eurostat database and calculated the rates for four years 2003-2006, as well as the numbers and the rates for the 31 countries.

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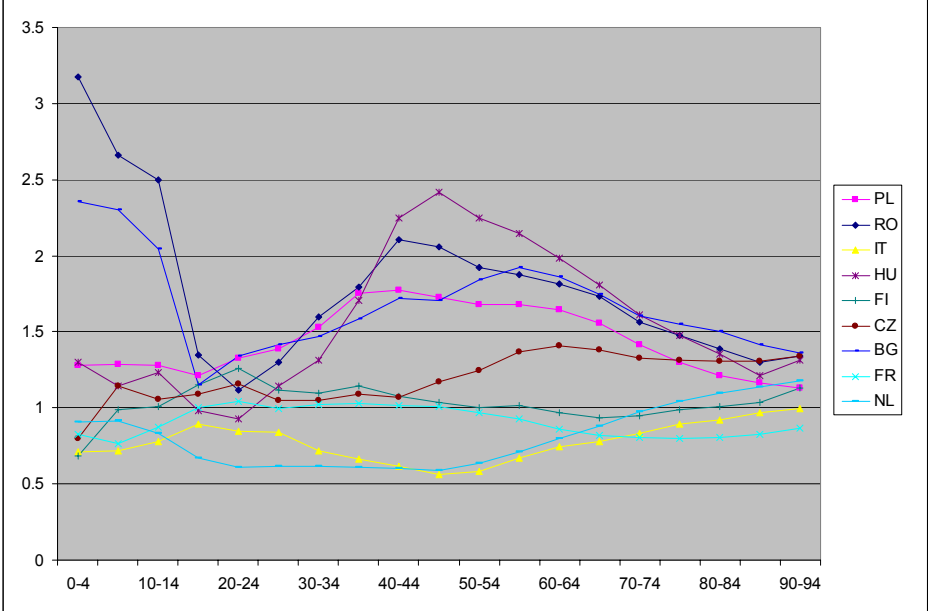
<sup>1</sup> [http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search\\_database](http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database).

The completeness of data on deaths in the Eurostat database was far better than for the data on population stock, although a lot of data processing was necessary in order to assemble all the data. On the country level, data were missing only for the highest age groups (90+) in Malta in 2006. On the regional level, there were no data for the German regions Brandenburg-Nordost and Brandenburg-Südwest (but the data were available for the whole Brandenburg) and for all the Danish NUTS2 regions (except Denmark 2006). For the regions of Romania, data for the highest age groups were missing for 2003-2005, but were available for 2006. For a number of countries there were inconsistencies between regional data and country level data (the sum over the regions gave a different number of deaths than according to the country-level data). These inconsistencies were investigated by checking the websites of national statistical institutes. As a result, corrections were introduced into regional data for Hungary, Portugal 2005 and Slovakia 2006.

The main difficulty in the case of mortality data was the high level of statistical variations in the values of age-specific rates for the age groups in which the annual number of death events is small. Obviously, the smaller the region the larger the number of age groups affected by this problem.

A detailed investigation of data revealed the existence of a variety of shapes of age profiles of mortality rates, with significant differences among countries and even between the regions. In order to illustrate the differences, we have calculated the ratios of the country mortality rates (sex and age-specific) to the rates calculated for the aggregate of the 31 countries. The results for the selected countries are presented in Figure 1. On this figure, the Europe aggregate is represented by a straight line at the level of 1. The points above this level reflect mortality higher than for the Europe aggregate, while those below 1 reflect lower mortality.

**Figure 1. Ratios of the age-specific mortality rates of males in the selected countries to the rates observed in the 31 European countries aggregate (2003-2006 average).**

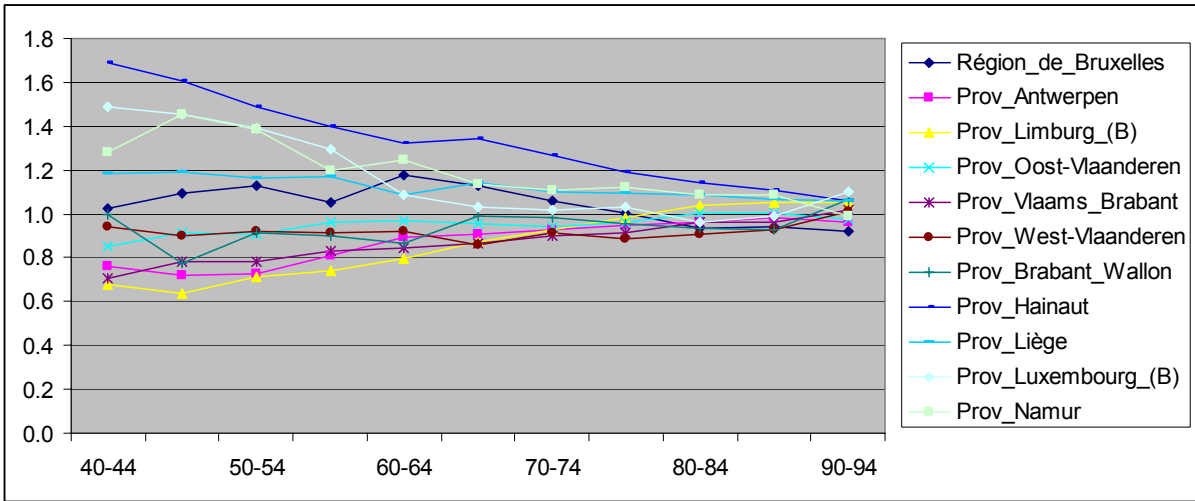


Source: own calculations based on data specified in the report.

For the regions, the ratios of the regional sex and age-specific mortality rates to the rates observed in the respective countries were calculated. Examples of regional differences are given in Figures 2 and 3, for Belgium and Slovakia respectively.

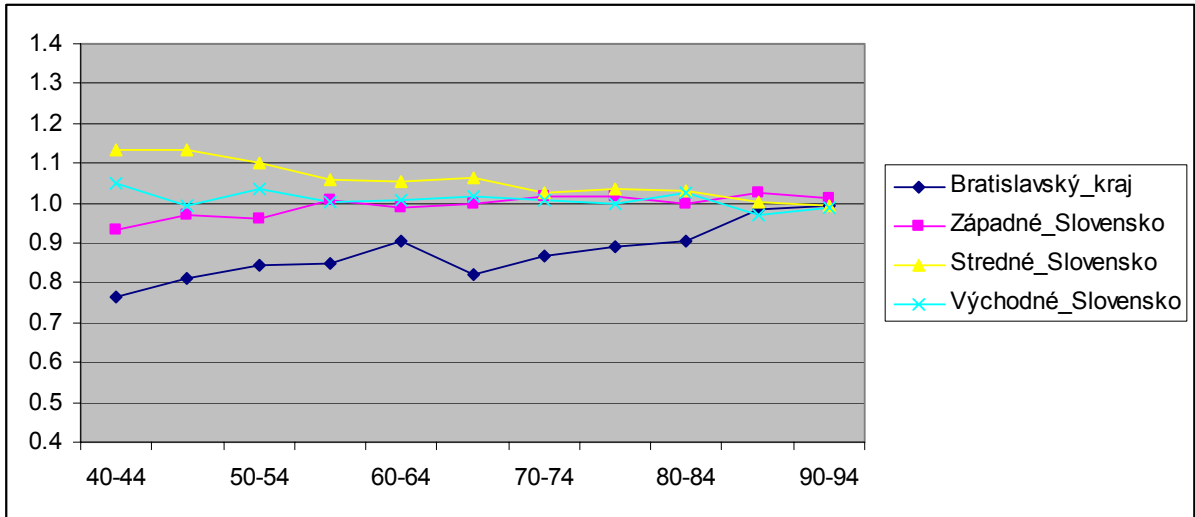
Taking into account the problem of statistical variations and the regional differences, we have adopted the following methodology to prepare the mortality data for the reference scenarios. Firstly, sex- and age-specific mortality rates of four small, one region countries were estimated using the more stable data of other countries with similar age patterns. The “borrowed” rates were inflated or deflated to give the observed level of deaths (total over the age groups). In particular: Lichtenstein mortality rates were estimated using the rates for Switzerland, Luxembourg rates for the ages 0-45 were based on the rates for Belgium, Malta 0-45 based on Italy and Island 0-50 based on Sweden. The *status quo* mortality rates for the remaining countries were left unchanged compared to the observed 2003-2006 average.

**Figure 2. Ratios of the regional age-specific mortality rates of males to the average rates observed in Belgium (2003-2006 average).**



Source: own calculations based on data specified in the report.

**Figure 3. Ratios of the regional age-specific mortality rates of males to the average rates observed in Slovakia (2003-2006 average)**



Source: own calculations based on data specified in the report.

In the second step, we have tackled the regional rates. For the age groups with a large number of death events, the observed rates were sufficiently reliable and taken without changes. For the younger age groups (the range differing between the countries and sexes, e.g. 0-45 for

males in Belgium), the age profile of the country was assumed and adjusted to give (when applied to regional population numbers) the observed number of deaths in the considered age range in the region (for each sex separately).

Finally, we dealt with the rates for the two highest age groups, for which the rates calculated from the reported data are not very reliable (both regional and national ones). The rates for the age group 100+ were assumed to be the same as those for 95-99 (this was necessary due to a very small size of population at risk and hence unreliable data). The rates for the age group 95-99 and 100+ were assumed to be equal to the European average (for males and females separately).

The rates for the Danish regions were estimated in a similar way using the sex and age-specific rates for Denmark and the data on the number of deaths by region and sex.

## 2.3 Fertility

Data on births by region and age of mother (in completed years) were collected for 2004 and 2005. Based on these data and on previously collected data on population, occurrence-exposure rates for 2004 and 2005 were calculated and averaged. The resulting rates were used in the reference scenarios as age and region specific fertility rates.

The main source of the data was the Eurostat database. In some cases we used other sources:

- For Belgium, we obtained the required data on the number of births by mother's age directly from the Belgian statistical office, courtesy of Mr. Michel Willems and Mr Nicolas Perrin.
- For Denmark, the data on births by age group or age-specific fertility rates were missing for NUTS regions for 2004 and 2005, but were available for 2006. We estimated the rates for 2004 and 2005 based on the 2006 rates applied to 2004 and 2006 populations and adjusted to total number of births in Denmark in 2004 and 2005.
- We had to estimate the distribution of births by age in two German regions: Brandenburg-Nordost and Brandenburg-Südwest, for which the distribution for Brandenburg was used as the pattern and the regional distributions were shifted up or down to match the total number of births in the regions.
- The missing number of births in the last two fertile age groups (40-44 and 45-49) in the regions of Romania in 2004 were estimated by applying the national age distributions
- For the UK, we used the estimates of the number of births kindly provided by P. Rees, which are based on ONS data.

Births from mothers younger than 15 years were added to the births in the age group 15-19. Similarly, births from mothers 50 and over were added to the births in the 45-49 age group. If there was a record of births from mothers whose age was unknown, they were added proportionally to the birth counts in the age groups, in other words we assumed that the probability of not recording the age of mother is the same in all the age groups.

In addition to the data on fertility rates, information on the share of males in total births was required for each country. According to the UN data (United Nations, 2009) these shares are very similar across all the European countries. The value of 0.514 (the average of the UN data for the 31 ESPON countries) was assumed for the proportion of males in total births in all the countries and regions in the reference scenarios.

## 2.4 Internal migration

Internal migration data describe the migration flows between NUTS2 regions within each out of 23 countries. The remaining eight countries - Cyprus, Estonia, Iceland, Liechtenstein, Lithuania, Luxembourg, Latvia and Malta – comprise one NUTS2 region. In the MULTIPOLES model, the internal migration component is modelled through internal out-migration rates specified for each combination of origin and destination NUTS2 region, sex and 5-year age group (ODAS array, age to 100+).

The *status quo* values of the rates were obtained using the 2006 estimates prepared by Dr Peter Boden within Deliverable 6, rescaled to 2005. The details of the data and methods used to derive 2006 estimates are presented in Deliverable 6. In a nutshell: the calculations were based on the data on the flows between each pair of regions within the country (OD matrix) and out-migration numbers by sex and age (OAS data). The 2006 data were collected from Eurostat and national statistical institutes, or taken from the most recent data available (2005 for Italy, 2001 for Greece and Portugal). For the UK, additional estimations were needed. The rates for the 5-year age groups above 85 were assumed to be equal to the rates for the age group 85+.

Using the available 2004-2006 data on total flows within each country, Boden has also calculated the annual rate of the change of the internal migration rate, which we have used to rescale the 2006 estimates to get the 2005 estimates of the ODAS array.

## 2.5 International migration between the 31 ESPON countries

The MULTPOLES model calculates the size of international flows for each OD pair of NUTS2 regions, age group and sex. The calculations are done by applying emigration rates to regional populations in the given age group (to 100+) and sex. The array of ODAS emigration rates for all NUTS2 regions is estimated within the model using the following information provided in the input files: overall emigration rates for each region (OAS array), the distribution of migrants from each origin country by destination countries (including the Rest of the world), and the distribution of immigrants to each country by destination region.

Usually, the main difficulty in estimating migration flows is the fact that the numbers concerning the same (at least in theory) flow, reported by different countries, are not the same, i.e. the number of persons who moved from country A to country B registered in the immigration statistics of country B is different than the one registered in the emigration statistics of country A. For the European countries the problem was discussed in detail by Kupiszewska and Nowok (200) and more recently by Kupiszewska *et al.* (2010). Until recently, there was no good solution to the problem, as far as the estimation of a consistent data set is concerned. The rescue came from the MIMOSA (*Modelling of statistical data on migration and migrant populations*) project, completed in December 2009<sup>2</sup>. Within MIMOSA, the 2002-2007 arrays of flows between 31 European countries were estimated, in disaggregation by sex and 5-year age group (up to 85+). There is no doubt that further work is

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<sup>2</sup> <http://mimosa.gedap.be/>

needed to improve the estimates, but at the moment these are the only complete and consistent estimates that exist for the European countries.

MIMOSA estimates were the main source of data for preparing the estimates of international migration flows for the reference scenarios. However, MIMOSA did not provide any information on the regional level. In order to fill this gap we used the regional data on total immigration and emigration, in disaggregation by sex, obtained from Eurostat or downloaded from the websites of the NSIs. Eurostat data were available for some or all years 2001-2004, while the NSI data were more recent, typically for the years 2003-2006. Eurostat data were used for eleven out of 23 multiregional countries: Austria, Belgium, Switzerland, Czech Republic, Spain, Finland, Netherlands, Norway, Poland, Portugal (for immigration only) and Slovakia. Data from the NSI websites were used for seven countries: Germany, Denmark (for Denmark, we have aggregated the data available on NUTS3 level), Hungary Italy, Romania, Sweden and Slovenia. Data for the UK were provided by P. Rees. No information on the regional distribution of international migration flows was available for Bulgaria, France, Greece and Ireland.

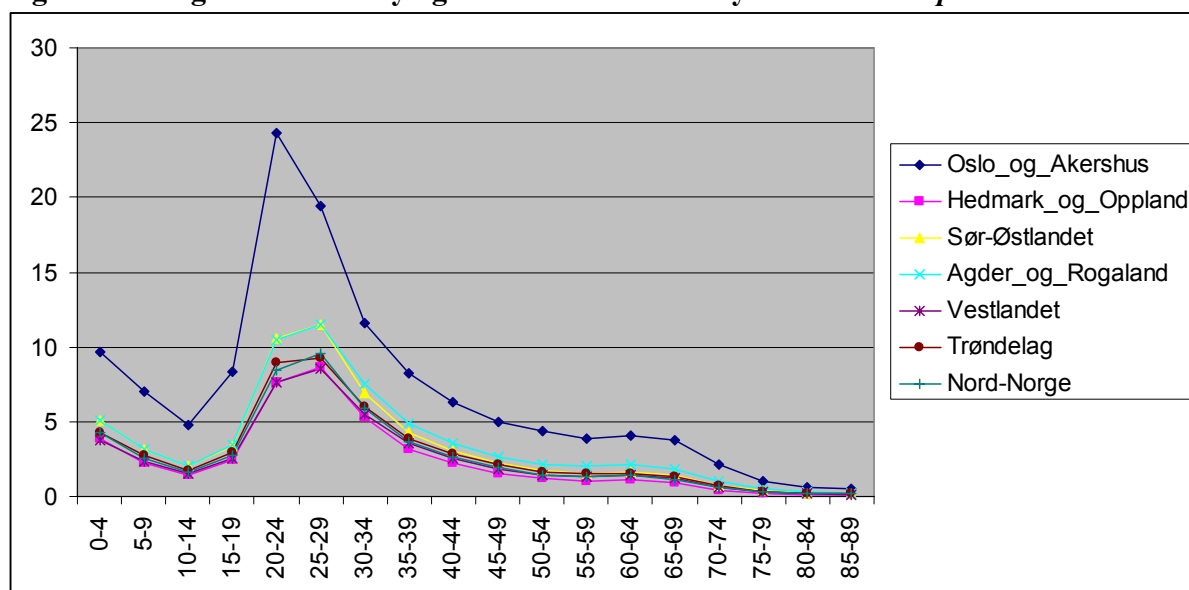
The procedure to prepare the estimates required by DEMIFER was as follows. We have used MIMOSA estimates to calculate the number of emigrants from each country by age and sex. The averages of the 2002-2006 numbers were used for the *Status quo* scenario. They were distributed among the regions using the regional shares calculated from the Eurostat/NSI data on the total emigration from each region to anywhere abroad. By dividing the obtained numbers by regional populations, we arrived at the OAS array of regional emigration rates. For the countries where the information on the regional distribution of emigrants was missing (Bulgaria, France, Greece, Ireland and Portugal), it was assumed that the emigration rates for each region are the same as for the whole country. The highest age group in the MIMOSA estimates was 85+, and we have assumed that the rates for the 5-year age groups above 85 are the same as for 85+.

The percentage distribution of migrants from each country among the destination countries was calculated using MIMOSA data (again, the average over 2002-2006 was taken). The share of immigrants arriving to each destination region within the country was calculated using the Eurostat/NSI data on the regional distribution of all immigrating persons (from within Europe and from the Rest of the world) described above. For the four countries for which there was no information about the regional distribution of immigration flows, the distribution was modelled within MULTIPOLES, in proportion to the regional populations.

A similar method was used to prepare the input for the “No migration” scenario. The difference was that only the flows to the European countries were taken into account, while the flows to the Rest of the world were ignored.

An example of emigration rates of males in the regions of Norway is presented in Figure 4.

**Figure 4. Emigration rates by age for males in Norway in the *Status quo* scenario.**



Source: own calculations based on data specified in the report.

## 2.6 Extra-Europe migration

For modelling the extra-Europe migration in the *Status quo* scenario, two types of information are required for each region: data on emigration rates to the Rest of the world and data on immigration numbers, both in the disaggregation by age and sex. Emigration rates to the Rest of the world are calculated in MULTIPOLES using the data described in the previous section (in particular using the information on the share of migrant to the Rest of the world). For immigration, the following data are required:

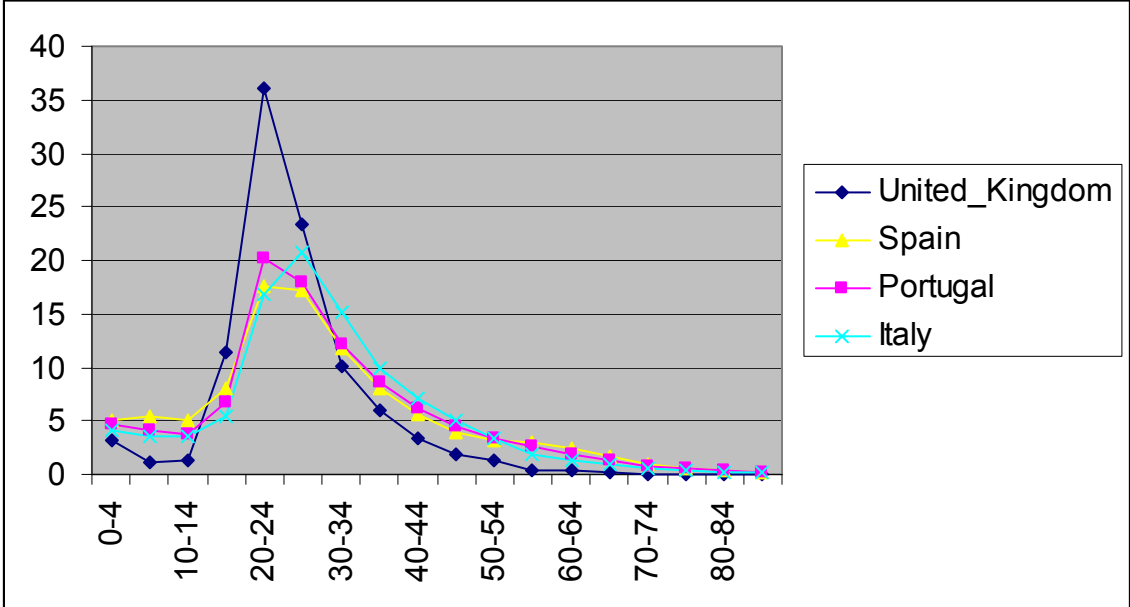
- average annual number of the extra-Europe immigrants arriving to each country
- share of males among the extra-Europe immigrants
- age distribution by 5 year age group, up to 100+, for each sex.
- distribution of the extra-Europe immigrants among the destination regions of each country, for each sex.

The required data, except the regional distribution, were prepared using the MIMOSA estimates. As for the intra-Europe international migration, the average of 2002-2006 numbers were assumed for the *Status quo* scenario. As an example, the age distribution of migrants from the rest of the world to Italy, Portugal, Spain and the UK is shown in Figure 5. No information was available on the distribution of migrants above the age of 85 among the 5-year age groups. We have assigned them to the 85-89 age groups, so we assumed that there are no migrants from outside Europe who are 90 or more years old.

The status-quo regional distribution of immigrants from the rest of the world was assumed to be the same as the distribution of all immigrants, thus the same as the distribution of the intra-Europe immigrants.



**Figure 5. Age distribution of the extra-Europe immigrants to selected European countries in the Status quo scenario.**



Source: own calculations based on data specified in the report.

**2.7 Labour force participation**

In order to model labour force resources, MULTIPOLES requires data on activity rates by sex and 5-year age group (15-75+) for all the regions. As no data at this disaggregation level were available, the estimates had to be prepared. Some regional data on the number of economically active persons are available for 10-year age groups, however these data, originating from the Labour Force Survey, have large statistical variations and were not considered suitable for the projection purposes. Instead, it was decided to prepare the regional estimates for each sex using the country data on activity rates by age and sex combined with the regional data on the total number of economically active.

As the first step, the data on the activity rates on the country level and the size of active population in the regions in the years 2003-2008, estimated from the results of the Labour Force Survey, were collected for both sexes from the Eurostat database. For the age groups up to 65 the data on the activity rates were fairly complete with only Liechtenstein and a few additional cells missing. The availability of data for the higher age groups was patchy. The missing information on 2004 and 2005 rates was estimated in various ways, in particular using the data from the ILO or assuming the rates from other years. For Liechtenstein, the activity rates observed in Switzerland were assumed.

In the next step, the activity rates for the regions were estimated (separately for each sex) using the country rates adjusted in such a way that the observed total number of economically active in the region is obtained when the rates are applied to the regional populations. This was done separately for 2004 and 2005 and the averages of the 2004 and 2005 estimates were used as the *status quo* values.

### **3 Brief characteristics of regional population and labour force in 2005 and long term consequences of existing demographic and labour market trends**

#### **3.1 Regional population and labour force in 2005**

Before we analyse the impact of migration on regional population and labour force, a brief characteristics of the situation in 2005 and the consequences of long term maintenance of demographic and labour force patterns observed in 2005 will be offered.

Ageing is a universal process in Europe, but there are differences in the level of its advancement across the regions. The lowest value of the old-age dependency ratio in 2005 (Map10, Appendix C) was observed in Flevoland and equalled 12.7. The highest, of 42.4 occurred in Liguria. The difference is over threefold. The ODR value denotes the number of people at the age 65 or more per 100 persons at the age 15-64 and can be considered as a simple measure of ageing (however it ignores the size of the youngest sector of population). In general, lower values of ODR were seen in Northern (Iceland, Ireland) and Central Europe (north-western Poland, Slovakia, separated regions in Central and North-Eastern Romania). Low ODR values were also observed in Île de France (Paris), Noord Holland (Amsterdam), Strední Čechy surrounding Prague, in Oslo and in Bucharest. From the studies conducted in a finer spatial scale (Rees, Kupiszewski, 1999), we know that relatively young population lives in suburban areas of large cities and metropolis (as demonstrated in the case of Prague and its hinterland, where boundaries of NUTS2 regions disclose the structure of population in the metropolitan city and its surrounding). The highest values of the ODR were observed in a belt going from central Portugal through northern Spain, north-east and central Italy to Greece. Isolated regions with the high ODR values are in Germany, mostly in the former GDR and in Saarland and Rheinland-Pfalz, as well as in south-western England and central Sweden. Generalising this picture one may expect increasing ODR values going from the North to the South and from the East to the West.

Except ODR, all analysed dependency ratios depend on economically active population aged 15+, which stands in the denominator. In particular, the *very old age dependency ratio* was constructed to inform on the number of very old old (defined as 75+) per 100 economically active persons. As people in that age may require more or less permanent institutional care, the indicator tells us what would be the burden of very old age related care on the working population. In 2005 the highest values of the VODR were observed in Corsica (32) and Liguria (31.9), the lowest in Flevoland (7.2) and in Lichtenstein (8.6) (see Table 3 and Map 14 in Appendix C). Lower values of the indicator are in north-eastern part of Europe, with VODR below 10 scattered as isolated regions in Iceland, Ireland, the Netherlands, Poland, Slovakia and the Czech Republic. High values, over 30 persons aged 75+ per 100 economically active persons, concentrate in Spain, France and Italy, with an outcrops in central Sweden, Greece and Bulgaria.

Even this brief analysis of the ODR and VODR values in the European regions in 2005 shows that there is no one European demography, instead there are various regional demographies.

### **3.2 Long term consequences of existing demographic and labour market trends (Status Quo projection 2005-2050)**

The *Status Quo* projection calculates the population and labour force under assumption that there would be no change in age, sex and region specific rates of fertility, mortality, emigration and labour force participation. Therefore, it shows the long term consequences of the observed demographic and labour market patterns for future population and labour force size and structure. The total ESPON population would reduce from 503.5 million in 2005 to 463.2 million in 2050, that is to 92% of the initial population. On the regional level the differentiation is substantial: out of 287 regions, 119 (41,5%) would experience a population increase and 168 – a decrease (Map 1). An increase would take place in Iceland, Ireland, most of the UK, southern and western France, southern Spain, northern and central Italy, in selected (mostly southern) regions of the countries occupying the Scandinavian Peninsula and in Austria. Notably, not a single region in Central and Eastern Europe (new 8+2 EU member states) could expect a population increase. To the contrary: the highest decrease, by over 50%, would be expected in all the regions of Romania, except Bucharest and its hinterland – the Sud Muntenia region. An over 50% reduction in regional populations would also occur in northern Bulgaria, Opolskie and Śląskie regions in Poland and in Chemnitz (Germany). The *Status Quo* projection is not a forecast, however these results should ring alarm bells in these 11 regions as well as in 86 regions in which the population decrease would be within the range between 20 and 50 per cent.

The labour force would drop in the Status Quo scenario, from 236,8 million in 2005 to 196,2 in 2050, that is to 82,8% of the initial value. Regional labour force would increase in 76 regions (26,5%) and decrease in 211 (Map 4). An increase would be observed in Iceland, Ireland, Luxembourg, England, in France along the Bay of Biscay, Pyrenees and Mediterranean, in central and northern Italy, and in isolated regions of Spain, Sweden, Norway, the Netherlands, Belgium and Greece. More worrying are the regions with decreasing labour force. In 23 regions labour resources would shrink by 50% or more. These regions are: Latvia, most regions of Romania and Bulgaria (in the case of the two latter, all but the capital cities and their immediate hinterland, in which the labour force decrease would be significant but below the 50% mark), regions in western part of the former East Germany and selected regions of Poland. Even if we put aside the extreme cases, the decrease in labour force would be almost universal in the part of Europe from the east of German western border down to Adriatic coast and Black Sea. Also Portugal and northern Spain would expect a decrease in labour resources.

In most cases capital cities which constitute NUTS2 regions would be in a better position, both in terms of population change and labour force change, than the rest of regions in a given country, but they rarely differ significantly from surrounding regions. However the spatial scale used in the scenarios was not suitable to study the demographic differences between large cities and the rest of the ESPON regions.

The changes in the population and labour size are accompanied by the changes in their age structures. In 2005 in most of the regions (230) VODR was between 10 and 20 and in almost all (285 out of 287) it was below 30. Forty five years later the number of regions with VODR above 30 would rise from 2 to 150, with the extreme cases of VODR between 50 and 60 concentrated in southern Europe (northern Spain, Corsica, Sardinia, south-eastern Italy) and in Poland (Opolskie and Śląskie regions) (Map 15). The lowest VODR values are expected in

northern and eastern Europe. The changes in the VODR values are quite dramatic and arise mainly from increased longevity and low fertility. Increase in longevity is a great and undisputable success of Europe. However, situation when the increasing number of elderly is disproportional in comparison to the increase in total population may cause problems with provision of adequate services, especially on regional level. There would be a need to reorganize social and medical care or in extreme cases – perhaps the entire economy, in order to cater for a large number of very old persons.

This spatial differentiation of ODR and VODR indicators demonstrates the division of Europe into younger North-Eastern part and older South-Western.

Unless European regions undergo in future a fundamental change of demographic patterns, their populations will be profoundly affected. One of the consequences of the maintenance of the current demographic patterns would be depopulation not only of regions, but entire nations, such as Romania, Bulgaria, the Baltic States and to a lesser degree the Czech Republic, Slovakia, Poland, Germany. Moreover, the combination of the 2005 labour force participation rates with the 2005 demographic patterns would lead in a long term to the reduction of labour resources by more than 20% in 45% of the European regions. Clearly, such levels of economic activity are untenable, especially given an increasing number of workers needed to provide elderly care.

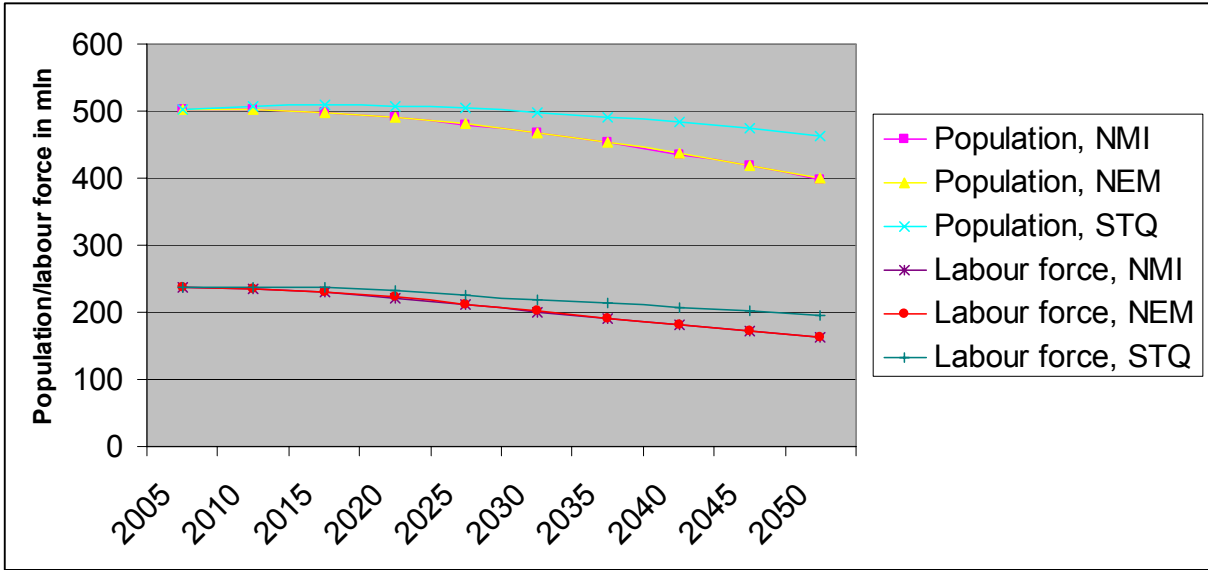
#### 4. Assessment of the impact of components of growth and various types of migration on population and labour force development

The MULTIPOLES model provides a number of characteristics of regional and national populations in subsequent points in time (in 5-year intervals). This is a large amount of information which forces us to a very restrictive approach to the selection of the results for, presentation and interpretation. Here, we examine two aspects of the impact of migration, and the extra-Europe international migration in particular, on the population development: (i) the migration-induced change of the overall size of population and labour force and (ii) the impact of migration on the change of the population and labour force age structures.

The measurement of the impact of migration on the overall population and labour force resources was conducted by a simple comparison of the percentage change in the population and labour force numbers obtained in various simulations. The differences in the numbers in various scenarios inform us on the role of migration in population and labour force development in various regions. In particular, using the results of the three simulations (*Status quo*, *No extra-Europe migration* and *No migration*) we were able to quantify the impact of the two categories of migration: intra-Europe and extra-Europe, and to assess their relative importance compared to the impact of the natural population change.

Population of the ESPON countries equalled 503,5 million in 2005. In the *Status Quo* projection it would decrease to 463,2 million in 2050, thus by 8%. This decrease would be much larger in the *No migration* and *No extra-Europe migration* simulations: by 20.6 per cent (to 398,4 million) and by 20.9 per cent (to 399,6 million) respectively (Figure 6). Therefore, over 45 years, extra-Europe migration would generate additional 63,5 million persons in the ESPON space. In other words, in the *Status Quo* scenario there would be 16% more persons in Europe than in the *No extra-Europe migration* simulation. Further 1,3 million would be due to intra-Europe migration and consequent relocation of population from regions with lower fertility to regions with the higher one and from regions with higher mortality to regions with lower mortality.

**Figure 6. Population and labour force change in the Status Quo (STQ), No migration (NMI) and No extra-Europe migration (NEM) scenarios, 2005 -2050**



In the Status Quo scenario the labour force would drop from 236,8 million in 2005 to 196,2 in 2050. External migration would contribute 32,8 million economically active and intra-ESPON space migration further 687 thousand. As a result, 2050 population in the *Status Quo* scenario would be 20,1% higher than in the *No-extra-Europe* migration scenario. It is notable that the migration-induced difference in labour force is, in percentage terms, substantially higher than the overall increase in population. This observation allows us to set a hypothesis that extra-Europe migration is an efficient tool from the point of view of the provision of labour force. However, we do not know what would be the share of unemployed in this part of labour force which would be generated by the external migration.

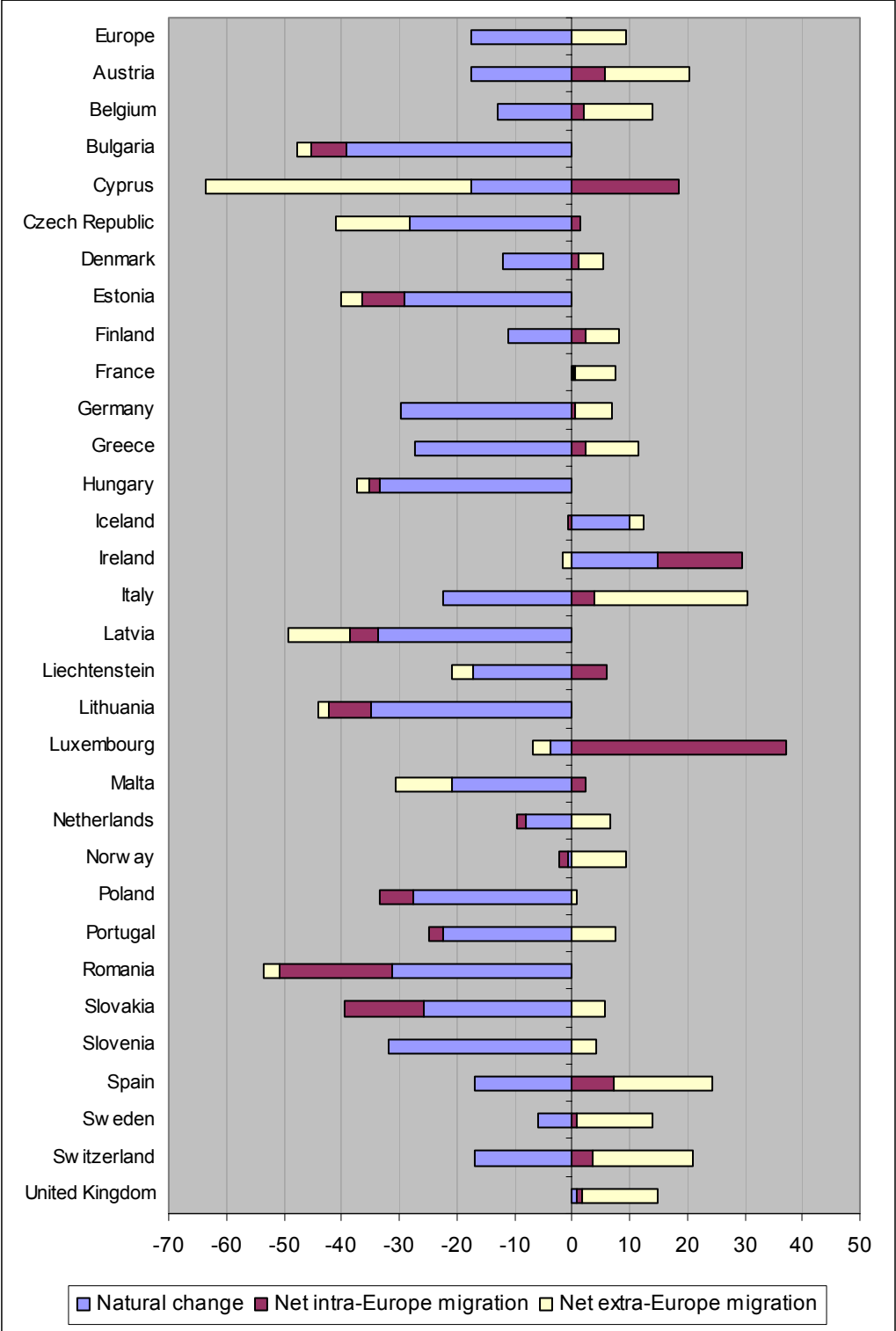
#### 4.1 Impact of components of growth on population dynamics

To better understand the processes of population change in individual countries and regions, it is important to look at the relative impact of natural change and the impact of various migration streams: extra-Europe migration, international migration within Europe and internal migration. This can be done in two ways. The first one is based on the analysis of the values of the components of population change. It shows that in most of the regions natural change of population (births minus deaths) has larger impact on population than migration flows. Still, in 115 regions (41%) the opposite is true. Figure 7 shows the percentage change of population due to natural change and two types of migration flows for the ESPON countries, while the results for the individual regions are presented in Appendix B.

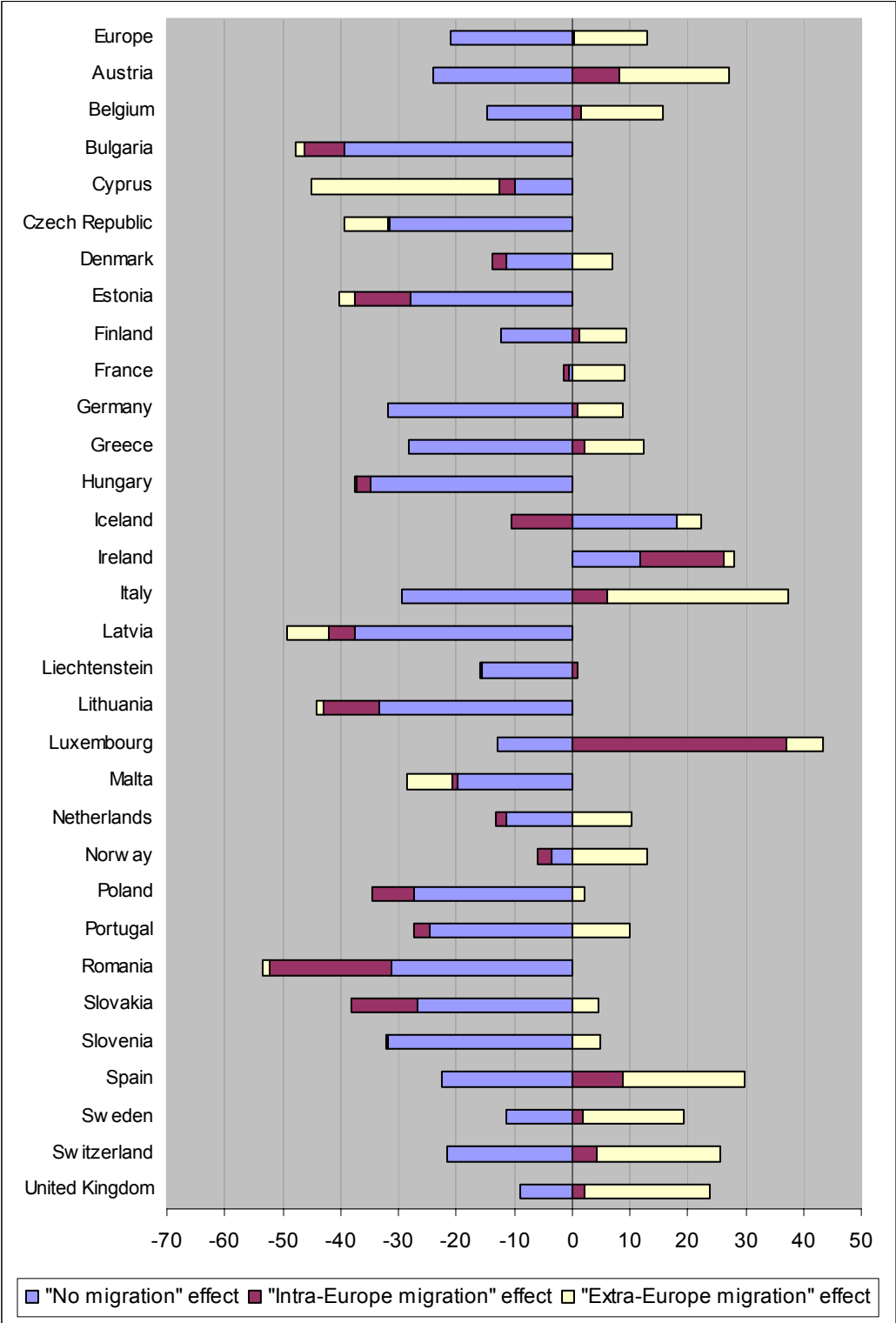
The approach based on the components of population change does not fully reflect the role of migration, namely it does not take into account that migration has additional indirect impact by changing natural increase. To see how population would change in the absence of migration we have run the *No migration* scenario, and we have labelled this change as “No migration” effect. The effect of international migration within Europe and internal migration (labelled “Intra-Europe migration” effect) was calculated by comparing the change of population in the *No extra-Europe migration* simulation and the *No migration* one. Finally, by comparing the results of the *Status Quo* projection, where all migrations streams are switched on, with the *No extra-Europe migration* simulation we could evaluate the impact of extra-Europe migration (labelled “Extra-Europe migration” effect). The role of the three effect is presented in Figure 8 (for the counties) and in Appendix B (for the regions).

In 32% of regions intra-Europe migration has a larger impact on population change than extra-Europe migration. This is true in particular in the regions of Bulgaria, Estonia, Lithuania, Poland, Romania and Slovakia, where population decreases significantly through intra-Europe migration (Figure 8). In the majority of regions in Western Europe, extra-Europe migration is more significant than intra-Europe migration and is the factor that reduces population decline or even causes an increase. Generally, out of 119 regions that would experience an increase of population, 92 would do so mainly as the result of extra-Europe migration, 22 mainly due to intra-Europe migration and 5 due to natural change. Out of 168 regions which would lose population, a majority (149) would do so mainly because of natural change and 18 (including 11 regions in France) predominantly due to intra-Europe migration (Appendix B).

**Figure 7. Components of population change 2005- 2050, NUTS0, STQ projection**



**Figure 8. Impact of migration on population change, NUTS0**





As an illustration, we will take the example of Eastern Scotland. In the *Status Quo* scenario, population of Eastern Scotland would increase from 1934 thousand in 2005 to 2117 thousand in 2050, so by 9.5%. Natural change, calculated as births minus deaths, would be negative and equal -10.8% of the 2005 population. Total net migration would be 20.3%, including net intra-Europe migration of 8.8% and net extra-Europe migration of 11.5% respectively. If there were no migration, natural change would be -20.1%, and population would decrease by 20.1%. Clearly, international migration modify natural change. Population in the scenario with intra-Europe migration is by 10.1% larger than without any migration. Extra-Europe migration generate an additional 19.5% increase. Thus, the migration-induced population change is in this case larger than suggested by the migration flow numbers only.

## 4.2 Impact of migration on population and labour force size

The population patterns observed in the *Status Quo* scenario are the result of natural population change and migration. The question is how important the influence of migration is and in particular how big role the extra-Europe migrants play in the population and labour force dynamics.

The first observation is that migration very significantly influences regional populations. Map 7 presents the regional differences between the 2050 populations in the *Status Quo* scenario and the *No Migration* scenario (this scenario excludes all categories of migration, internal and international), scaled to the latter. It presents the overall impact of migration, including migration *per se* and the migration-induced natural change. Clearly the vast majority of regions (over 75%) are gainers. In nearly a quarter (23,7%) of all the regions, 2050 population would be higher by 30% or more compared to the *No migration* scenario. In the EU15, almost all regions, except those in north-eastern France, north-eastern Finland and in south-eastern former East Germany profit from migration. The most profound gains would take place in Italy south of Naples, some south-western regions of Spain, western France, all forming a broad Mediterranean crescent, and east and west England.

This increase will be “financed” from three sources: extra-European migration, international intra-European migration and internal migration. The regions which would pay for this increase, are located in the east, especially in Romania and southern Poland. These regions will loose population mostly due to international intra-European migration. However internal migration also play a role and would fuel for example the increase of Bucharest, Mazowsze and the hinterland of Prague.

Overall the divide goes along the wealth and accessibility lines: affluent regions, including large agglomerations in Central and Eastern Europe would gain on migration whereas far away and poor regions would lose. Keeping in mind that migration is a powerful component of population dynamics, we should be aware of general consequences of migration, namely two interlinked processes: (i) regional and in some cases even national depopulation in areas most negatively affected by migration and (ii) concentration of population in the regions offering a combination of accessibility, affluence and nice climate.

There are differing views to what extent the population size influences regional development, and the consensus is that the key factor is the human and social capital which is not directly linked to the size of population. However very far going decrease of population cannot be

isolated from regional economic development. Therefore migration, as an important factor of depopulation, may lead to an increase in regional disparities.

Migration would have a very similar impact on labour force. Its geographic distribution (Map 8) is the same as the distribution of the impact of migration on population: in 217 regions the labour force would be higher due to migration (216 would have higher population) and in 70 - lower (71 in the case of population).

### 4.3 Impact of migration on population structure

Obviously, the impact of migration goes beyond the simple increase or decrease of population or labour force. It affects the age structures of populations and the labour force resources. As most migrants are in the young adult age group, their emigration raises VODR, as it reduces the number of economically active persons. At the same time, in the regions attracting migrants newcomers increase younger and more economically active population, reducing the proportion of the very old. There will be no surprise that the patterns of decrease and increase of VODR as the result of migration (Map 9) resembles strongly the pattern of migration-induced population gains and losses, respectively. 71.4% of European regions would experience lower VODR because of migration, 35 of them by more than 30%. The regions with the highest reduction (when comparing the *Status Quo* scenario with the *No migration* one) are in central and northern Italy, Mediterranean Spain, south-eastern Greece and capital cities of Europe (Bucharest, Vienna, Prague, Berlin, Zurich, Stockholm, Oslo, London, Madrid). On the other end of the spectrum two Polish regions, Opolskie and Śląskie would expect VODR larger by over 40 % and over 50% respectively than in the absence of migration. Generally, most of eastern Europe, in particular Romania, Bulgaria, Poland, Lithuania, Estonia would observe larger VODR as a consequence of migration. In the Scandinavian Peninsula southern regions would reduce and northern ones further increase the VODR. Clearly more affluent region would benefit from migration, reducing VODR, whereas migration would penalise poorer regions.

It may be interesting to investigate what levels of regional dependency ratios would be observed if there were no migration, i.e. if the natural change of the population already present in the region at the start of the projection was the only intervening factor. Let us start with an overview of the distribution of ODR values after 45 years, that is in 2050, in the *No Migration* simulation (Map 13). The picture we get is predictable, but to a certain extent only. Relatively low values will be observed in the north of Europe, northern and eastern France and northern Romania and Bulgaria (the increase of ODR in Severozapad would be meagre 1.4, from 32.8 to 34.2, over the period 2005 - 2050). The south of Europe would have the highest ODR values, but the increase in ODR in Spain, which would experience the highest ODR values (90.3 in Asturias) and the highest increase in absolute numbers (in Asturias by 58.2), would be much higher than in Greece. Also Germany and southern Austria would experience high ODR values, but mostly lower than in Italy and in particular in Spain. The urban centres, where ODR values were low in 2005, will have in 2050 ODRs higher than the regions surrounding them.

Maintaining the patterns of fertility and mortality observed in 2005, in the absence of migration, would generally lead to ageing (very far going in Spain and far going in Italy) and strong diversification, in comparison to 2005, of the regional ODR values.

Another indicator of ageing, VODR, would also change and differentiate substantially in the *No Migration* simulation. It would be very high in some regions, reaching over 80 in Asturias and 72,8 and 71,7 in Sardegna and Liguria respectively. Another 15 regions in Spain and Italy as well as Corsica would have VODR values over 60. Greece, Austria and Germany would experience also quite high values of VODR. In northern and central-eastern Europe the values of the indicator would be relatively low to moderate (except Opolskie region in Poland), below 40 (see Map 17 in Appendix C).

#### **4.4. Impact of extra-Europe migration on population and labour force size and structure**

One of the hot topics in research and in public debate is the assessment of the impact of the extra-Europe migration on population development in Europe. First observation, based on the comparison of the *Status Quo* and *No extra-Europe Migration* scenarios, is that most of the European regions gain population due to extra-Europe migration. This is not the case in 11% of regions, mostly located in the EU 10+2, especially the Czech Republic, Romania and Bulgaria. In some regions, in particular in Italy, but also in Algarve and Inner London populations in the STQ scenario would be over 40% larger than in the *No extra Europe migration* scenario. Extra-Europe migration would also reduce, often substantially, the value of the old age dependency ratios in all European regions. In some Italian and Spanish regions this reduction exceeds 40%. Considerable reductions, again compared with the hypothetical situation with no migration, would be expected also in Austria, Switzerland, Great Britain and Sweden.

Extra-European migration would enhance regional labour forces in 89,5% of the investigated regions. In 43 regions (15%) the differences between labour force in the *Status Quo* and *No extra-Europe migration* simulations would exceed 30%. However in the Baltic States, Cyprus and regions in the Czech Republic, Romania and Bulgaria extra-European migration would lower the labour force. The reduction is moderate in most cases, but in Cyprus would be as high as 34%. In all European regions, the labour market dependency ratios (LMDR) would be smaller due to extra-Europe migration. In Austria and Switzerland and a large part of the UK and Italy the difference would be within 10 to 20 percent bracket, therefore very significant. The differences between LMDR in the Status Quo and No-extra-Europe migration are smaller in the rest of Europe, especially in Central and Eastern Europe. Therefore extra-Europe migration would have a beneficial, albeit unequal impact on the balance between the labour force and economically inactive population.

## **5. Conclusions**

In general our research shows that migration, both extra-European and migration in general, would have a significant impact on demographic and labour force development of regions. Migration-induced population changes are not uniform across the regions. Importantly, they would benefit most affluent regions, whereas poor regions would lose population due to migration. Similarly, migration would reduce ageing in affluent regions and increase in poor and remote ones. Therefore we may expect that migration would be a strong factor increasing regional disparities. This is the aspect of regional policies which is not disputed much yet, but perhaps quite crucial for future regional developments. The only way to prevent the demography-related growth of regional disparities is to implement policies reducing

incentives to emigrate from poor to wealthy regions and policies allowing poor regions to attract more extra-European migrants.

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## Appendix A. Population and labour force in three reference scenarios: tables and maps

**Table 1. Population and labour force change in three reference scenarios**

|                |                       | Pop     |             |             |             | LF      |             |             |             |
|----------------|-----------------------|---------|-------------|-------------|-------------|---------|-------------|-------------|-------------|
|                |                       | 2005    | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005    | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| Austria        |                       |         |             |             |             |         |             |             |             |
| AT11           | Burgenland (A)        | 278033  | -34.4       | -15.0       | 1.1         | 132256  | -45.9       | -28.0       | -9.7        |
| AT12           | Niederösterreich      | 1568949 | -25.8       | -10.8       | 6.4         | 759585  | -36.1       | -24.2       | -4.9        |
| AT13           | Wien                  | 1632568 | -27.4       | -10.6       | 16.9        | 788315  | -42.7       | -23.2       | 6.9         |
| AT21           | Kärnten               | 558926  | -27.5       | -28.7       | -17.1       | 259300  | -39.6       | -42.4       | -29.2       |
| AT22           | Steiermark            | 1196780 | -28.9       | -22.0       | -7.8        | 570193  | -42.2       | -35.3       | -19.1       |
| AT31           | Oberösterreich        | 1394726 | -18.9       | -20.0       | -3.3        | 682080  | -31.5       | -33.9       | -15.5       |
| AT32           | Salzburg              | 522369  | -19.7       | -18.3       | 0.8         | 265929  | -34.4       | -33.0       | -11.9       |
| AT33           | Tirol                 | 688954  | -18.0       | -11.7       | 9.6         | 343690  | -33.7       | -27.5       | -3.7        |
| AT34           | Vorarlberg            | 360054  | -10.9       | -9.2        | 10.3        | 182119  | -25.7       | -24.8       | -3.5        |
| Belgium        |                       |         |             |             |             |         |             |             |             |
| BE10           | Brussels              |         |             |             |             |         |             |             |             |
|                | Hoofdstedelijk Gewest | 1006749 | 6.3         | -20.0       | 8.1         | 436250  | -10.1       | -29.7       | -0.7        |
| BE21           | Prov. Antwerpen       | 1676858 | -15.1       | -14.3       | 0.7         | 741628  | -25.9       | -25.2       | -9.3        |
| BE22           | Prov. Limburg (B)     | 809942  | -21.6       | -16.7       | -2.9        | 361106  | -35.4       | -31.1       | -16.8       |
| BE23           | Prov. Oost-Vlaanderen | 1380072 | -19.0       | -10.4       | -0.6        | 634512  | -30.4       | -21.8       | -11.3       |
| BE24           | Prov. Vlaams Brabant  | 1037786 | -17.8       | -11.3       | 4.7         | 485071  | -28.4       | -24.2       | -7.8        |
| BE25           | Prov. West-Vlaanderen | 1138503 | -21.8       | -16.4       | -8.9        | 508190  | -30.2       | -25.6       | -17.3       |
| BE31           | Prov. Brabant Wallon  | 363776  | -9.4        | -4.6        | 12.8        | 157787  | -17.3       | -17.5       | 0.4         |
| BE32           | Prov. Hainaut         | 1286275 | -16.2       | -13.6       | -1.6        | 512308  | -22.8       | -21.5       | -8.5        |
| BE33           | Prov. Liège           | 1034024 | -15.9       | -13.2       | -1.1        | 430924  | -23.2       | -21.2       | -8.0        |
| BE34           | Prov. Luxembourg (B)  | 256004  | -5.2        | 2.5         | 14.7        | 108629  | -12.2       | -5.1        | 8.2         |
| BE35           | Prov. Namur           | 455863  | -10.9       | -2.9        | 8.2         | 193253  | -18.4       | -11.6       | 0.4         |
| Bulgaria       |                       |         |             |             |             |         |             |             |             |
| BG31           | Severozapaden         | 974704  | -42.2       | -57.9       | -58.8       | 362412  | -42.9       | -60.3       | -60.8       |
| BG32           | Severen tsentralen    | 958755  | -44.3       | -52.3       | -53.5       | 397728  | -49.2       | -57.1       | -57.6       |
| BG33           | Severozitochen        | 1001668 | -35.7       | -45.8       | -47.3       | 440435  | -42.5       | -52.5       | -53.4       |
| BG34           | Yugoiztochen          | 1139926 | -33.1       | -44.9       | -46.5       | 471966  | -38.0       | -51.0       | -52.0       |
| BG41           | Yugozapaden           | 2114815 | -41.3       | -40.0       | -41.7       | 992026  | -51.1       | -48.8       | -49.6       |
| BG42           | Yuzhen tsentralen     | 1571181 | -38.0       | -45.3       | -46.7       | 656577  | -44.8       | -52.0       | -52.7       |
| Switzerland    |                       |         |             |             |             |         |             |             |             |
| CH01           | Région lémanique      | 1362754 | -17.3       | -13.9       | 14.9        | 727683  | -29.3       | -25.5       | 5.4         |
| CH02           | Espace Mittelland     | 1690135 | -22.7       | -20.8       | -2.7        | 947467  | -32.8       | -32.2       | -12.7       |
| CH03           | Nordwestschweiz       | 1017180 | -24.6       | -17.4       | 1.9         | 572014  | -36.7       | -30.0       | -9.7        |
| CH04           | Zürich                | 1261810 | -22.5       | -13.8       | 8.9         | 739489  | -37.5       | -27.2       | -3.3        |
| CH05           | Ostschweiz            | 1059586 | -21.1       | -22.7       | -4.1        | 599898  | -30.7       | -33.9       | -13.6       |
| CH06           | Zentralschweiz        | 703706  | -17.2       | -12.3       | 6.6         | 404246  | -28.9       | -25.0       | -4.8        |
| CH07           | Ticino                | 319931  | -31.5       | -17.1       | 4.2         | 158386  | -43.6       | -28.3       | -5.1        |
| CY00           | Cyprus                | 749175  | -9.7        | -12.4       | -45.0       | 377459  | -18.0       | -19.0       | -46.9       |
| Czech Republic |                       |         |             |             |             |         |             |             |             |
| CZ01           | Praha                 | 1170571 | -34.7       | -29.3       | -38.1       | 629948  | -48.4       | -39.8       | -44.1       |
| CZ02           | Střední Čechy         | 1144071 | -30.9       | -9.7        | -23.6       | 576510  | -40.9       | -23.8       | -34.8       |
| CZ03           | Jihozápad             | 1175330 | -32.3       | -31.7       | -40.6       | 596478  | -42.6       | -42.1       | -48.3       |
| CZ04           | Severozápad           | 1126721 | -30.0       | -35.2       | -33.1       | 577830  | -39.3       | -44.8       | -40.1       |
| CZ05           | Severovýchod          | 1480144 | -30.4       | -33.8       | -45.4       | 732647  | -40.2       | -43.9       | -53.1       |
| CZ06           | Jihovýchod            | 1640354 | -30.7       | -34.5       | -41.3       | 811012  | -41.3       | -45.0       | -48.7       |
| CZ07           | Střední Morava        | 1225832 | -32.2       | -37.4       | -46.9       | 601274  | -42.7       | -47.8       | -55.3       |
| CZ08           | Moravskoslezsko       | 1257554 | -31.9       | -39.4       | -43.0       | 616329  | -41.5       | -48.8       | -50.7       |
| Germany        |                       |         |             |             |             |         |             |             |             |
| DE11           | Stuttgart             | 4003172 | -25.8       | -27.8       | -19.6       | 2033171 | -37.0       | -39.2       | -29.8       |
| DE12           | Karlsruhe             | 2727733 | -30.2       | -27.8       | -17.9       | 1351244 | -41.5       | -39.6       | -28.5       |
| DE13           | Freiburg              | 2185027 | -26.3       | -24.0       | -15.4       | 1103420 | -36.5       | -35.7       | -25.9       |
| DE14           | Tübingen              | 1801487 | -23.2       | -26.5       | -17.7       | 901257  | -33.4       | -38.2       | -28.2       |
| DE21           | Oberbayern            | 4211118 | -27.6       | -5.3        | 4.9         | 2171234 | -40.5       | -18.5       | -6.9        |
| DE22           | Niederbayern          | 1196178 | -28.7       | -33.2       | -25.9       | 613887  | -37.8       | -42.8       | -34.4       |
| DE23           | Oberpfalz             | 1090289 | -30.0       | -32.5       | -26.2       | 551925  | -38.8       | -42.1       | -34.8       |
| DE24           | Oberfranken           | 1106541 | -34.9       | -41.5       | -36.5       | 548611  | -42.3       | -50.2       | -44.2       |
| DE25           | Mittelfranken         | 1708972 | -31.8       | -27.7       | -19.5       | 849221  | -41.5       | -38.0       | -28.5       |
| DE26           | Unterfranken          | 1344629 | -29.4       | -33.4       | -26.9       | 666178  | -38.7       | -43.8       | -36.2       |
| DE27           | Schwaben              | 1786166 | -25.9       | -28.4       | -21.6       | 895196  | -34.0       | -37.9       | -30.1       |

Table 1. continued

|      |                                 | Pop     |             |             |             | LF      |             |             |             |
|------|---------------------------------|---------|-------------|-------------|-------------|---------|-------------|-------------|-------------|
|      |                                 | 2005    | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005    | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| DE30 | Berlin                          | 3387828 | -36.0       | -27.2       | -16.4       | 1758009 | -52.3       | -39.6       | -27.7       |
| DE41 | Brandenburg - Nordost           | 1163924 | -40.7       | -38.5       | -32.0       | 615898  | -53.2       | -51.7       | -44.3       |
| DE42 | Brandenburg - Südwest           | 1403780 | -39.7       | -39.0       | -33.9       | 748591  | -52.5       | -51.9       | -46.1       |
| DE50 | Bremen                          | 663213  | -36.5       | -24.2       | -14.9       | 307773  | -47.2       | -32.6       | -21.9       |
| DE60 | Hamburg                         | 1734830 | -33.1       | 7.9         | 17.5        | 879925  | -48.4       | -5.1        | 6.2         |
| DE71 | Darmstadt                       | 3775025 | -30.2       | -25.6       | -15.8       | 1872415 | -42.7       | -37.3       | -26.2       |
| DE72 | Gießen                          | 1064228 | -30.3       | -35.6       | -28.7       | 515550  | -40.2       | -45.8       | -38.0       |
| DE73 | Kassel                          | 1258512 | -31.9       | -40.1       | -33.4       | 589089  | -39.4       | -49.0       | -41.1       |
| DE80 | Mecklenburg-Vorpommern          | 1719653 | -38.7       | -42.3       | -37.6       | 907196  | -51.7       | -54.9       | -49.6       |
| DE91 | Braunschweig                    | 1658918 | -34.5       | -27.6       | 4.4         | 757454  | -42.6       | -36.2       | -1.8        |
| DE92 | Hannover                        | 2166626 | -33.2       | -30.3       | -22.2       | 1024769 | -41.6       | -39.5       | -30.1       |
| DE93 | Lüneburg                        | 1702971 | -28.6       | -23.4       | -16.7       | 794068  | -34.6       | -32.6       | -24.7       |
| DE94 | Weser-Ems                       | 2472394 | -23.0       | -25.2       | -16.2       | 1157707 | -30.1       | -34.6       | -24.2       |
| DEA1 | Düsseldorf                      | 5237855 | -34.0       | -31.5       | -24.8       | 2421573 | -41.7       | -39.1       | -31.3       |
| DEA2 | Köln                            | 4363797 | -30.1       | -24.6       | -16.8       | 2008759 | -40.5       | -35.0       | -26.1       |
| DEA3 | Münster                         | 2624489 | -27.4       | -31.3       | -25.2       | 1198029 | -34.7       | -39.7       | -32.5       |
| DEA4 | Detmold                         | 2072488 | -23.5       | -30.9       | -25.3       | 989075  | -30.5       | -39.4       | -32.6       |
| DEA5 | Arnsberg                        | 3776723 | -32.1       | -37.0       | -29.8       | 1725514 | -39.4       | -44.4       | -36.0       |
| DEB1 | Koblenz                         | 1527507 | -31.2       | -34.9       | -29.1       | 724665  | -37.4       | -42.2       | -35.4       |
| DEB2 | Trier                           | 513861  | -30.6       | -20.9       | -12.1       | 246487  | -38.6       | -30.0       | -19.9       |
| DEB3 | Rheinhausen-Pfalz               | 2019737 | -32.7       | -28.2       | -20.3       | 955828  | -41.9       | -38.1       | -29.2       |
| DEC0 | Saarland                        | 1056417 | -39.9       | -45.6       | -39.4       | 474676  | -47.4       | -53.6       | -46.4       |
| DED1 | Chemnitz                        | 1553406 | -42.1       | -55.5       | -52.1       | 796819  | -52.3       | -65.6       | -61.5       |
| DED2 | Dresden                         | 1667676 | -36.4       | -38.2       | -32.4       | 857380  | -49.0       | -50.5       | -43.9       |
| DED3 | Leipzig                         | 1075202 | -39.6       | -37.1       | -31.6       | 559813  | -53.2       | -49.7       | -43.2       |
| DEE0 | Sachsen-Anhalt                  | 2494437 | -43.3       | -54.6       | -50.0       | 1254354 | -54.3       | -64.4       | -59.0       |
| DEF0 | Schleswig-Holstein              | 2828760 | -31.8       | -44.1       | -38.6       | 1366265 | -39.1       | -52.9       | -46.5       |
| DEG0 | Thüringen                       | 2355280 | -40.8       | -52.5       | -48.7       | 1222513 | -53.5       | -64.1       | -59.7       |
| DK01 | Denmark                         |         |             |             |             |         |             |             |             |
| DK01 | Hovedstaden                     | 1631635 | -15.1       | -14.6       | -7.1        | 899903  | -24.3       | -20.5       | -12.6       |
| DK02 | Sjælland                        | 805954  | -13.1       | -11.7       | -5.6        | 426540  | -16.2       | -20.1       | -13.9       |
| DK03 | Syddanmark                      | 1183751 | -10.9       | -16.5       | -9.7        | 624201  | -14.5       | -23.7       | -16.5       |
| DK04 | Midtjylland                     | 1212787 | -6.1        | -8.4        | -0.7        | 652496  | -12.7       | -16.6       | -8.7        |
| DK05 | Nordjylland                     | 577278  | -11.5       | -19.5       | -12.6       | 304862  | -15.5       | -25.8       | -18.5       |
| EE00 | Estonia                         | 1347510 | -28.0       | -37.5       | -40.1       | 667896  | -31.5       | -41.4       | -43.8       |
| ES11 | Spain                           |         |             |             |             |         |             |             |             |
| ES11 | Galicia                         | 2712162 | -38.4       | -34.1       | -24.1       | 1254924 | -55.1       | -50.9       | -39.3       |
| ES12 | Principado de Asturias          | 1059133 | -44.7       | -38.0       | -27.5       | 443542  | -61.5       | -54.3       | -42.8       |
| ES13 | Cantabria                       | 551085  | -30.9       | -20.2       | -7.8        | 256382  | -50.3       | -40.3       | -26.9       |
| ES21 | Pais Vasco                      | 2103441 | -32.6       | -36.6       | -32.3       | 1027849 | -51.9       | -53.8       | -48.2       |
| ES22 | Comunidad Foral de Navarra      | 580616  | -22.6       | -14.0       | 2.9         | 283466  | -42.1       | -35.0       | -17.1       |
| ES23 | La Rioja                        | 294347  | -25.5       | -13.0       | 5.8         | 142908  | -45.0       | -35.5       | -15.2       |
| ES24 | Aragón                          | 1243464 | -31.1       | -20.9       | -0.7        | 588225  | -47.3       | -38.3       | -16.4       |
| ES30 | Comunidad de Madrid             | 5821054 | -16.9       | -14.6       | 13.7        | 2984148 | -39.6       | -34.5       | -5.9        |
| ES41 | Castilla y León                 | 2469303 | -36.7       | -29.6       | -15.3       | 1097253 | -53.1       | -45.8       | -30.1       |
| ES42 | Castilla-la Mancha              | 1856787 | -21.6       | 11.3        | 39.0        | 816331  | -36.8       | -8.5        | 21.4        |
| ES43 | Extremadura                     | 1068799 | -25.2       | -21.8       | -9.8        | 453076  | -37.4       | -35.1       | -21.6       |
| ES51 | Cataluña                        | 6784145 | -20.7       | -18.3       | 0.5         | 3488009 | -40.1       | -37.0       | -16.4       |
| ES52 | Comunidad Valenciana            | 4518126 | -21.7       | 1.4         | 32.9        | 2215621 | -40.2       | -19.3       | 13.1        |
| ES53 | Illes Balears                   | 957953  | -18.4       | 4.3         | 35.7        | 498880  | -39.7       | -21.0       | 10.5        |
| ES61 | Andalucía                       | 7670365 | -14.4       | -5.7        | 13.5        | 3383473 | -30.5       | -23.6       | -3.3        |
| ES62 | Región de Murcia                | 1300083 | -7.1        | 11.8        | 46.8        | 613258  | -26.9       | -11.9       | 23.4        |
| ES63 | Ciudad Autónoma de Ceuta (ES)   | 71372   | 8.4         | -10.0       | 1.9         | 29731   | -8.1        | -27.9       | -15.3       |
| ES64 | Ciudad Autónoma de Melilla (ES) | 67102   | 12.5        | -29.7       | -35.4       | 27060   | -1.0        | -44.1       | -46.5       |
| ES70 | Canarias (ES)                   | 1908698 | -21.8       | -10.1       | 17.3        | 931588  | -43.6       | -32.9       | -5.7        |
| FI13 | Finland                         |         |             |             |             |         |             |             |             |
| FI13 | Itä-Suomi                       | 667056  | -20.2       | -31.2       | -25.4       | 303265  | -24.9       | -38.3       | -32.2       |
| FI18 | Etelä-Suomi                     | 2580801 | -15.0       | -5.1        | 4.2         | 1350422 | -26.0       | -14.8       | -5.4        |
| FI19 | Länsi-Suomi                     | 1330371 | -12.2       | -10.9       | -3.6        | 641090  | -19.8       | -19.7       | -12.2       |
| FI1A | Pohjois-Suomi                   | 631853  | 7.1         | -13.5       | -6.6        | 298939  | -1.5        | -23.5       | -16.6       |
| FI20 | Åland                           | 26530   | -15.9       | -13.1       | 8.4         | 13932   | -23.0       | -21.2       | 0.7         |

Table 1. continued

|      |                                     | Pop     |             |             |             | LF      |             |             |             |
|------|-------------------------------------|---------|-------------|-------------|-------------|---------|-------------|-------------|-------------|
|      |                                     | 2005    | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005    | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
|      | France                              |         |             |             |             |         |             |             |             |
| FR10 |                                     | 1144214 |             |             |             |         |             |             |             |
|      | Île de France                       | 3       | 10.7        | -10.6       | -2.7        | 5484536 | -8.8        | -22.5       | -14.5       |
| FR21 | Champagne-Ardenne                   | 1339400 | -4.5        | -22.9       | -15.3       | 613938  | -14.0       | -34.2       | -26.2       |
| FR22 | Picardie                            | 1889028 | 2.8         | -11.6       | -3.4        | 836310  | -6.6        | -23.2       | -14.6       |
| FR23 | Haute-Normandie                     | 1806677 | 1.4         | -11.0       | -2.7        | 828196  | -7.7        | -21.5       | -12.7       |
| FR24 | Centre                              | 2507246 | -5.3        | -7.0        | 2.1         | 1135923 | -13.2       | -18.0       | -8.2        |
| FR25 | Basse-Normandie                     | 1452425 | -4.5        | -9.5        | -0.7        | 624076  | -10.8       | -19.3       | -9.7        |
| FR26 | Bourgogne                           | 1626190 | -12.4       | -13.6       | -4.9        | 721510  | -18.8       | -23.1       | -13.6       |
| FR30 | Nord - Pas-de-Calais                | 4015613 | 6.6         | -14.5       | -6.9        | 1760477 | -1.3        | -23.7       | -15.7       |
| FR41 | Lorraine                            | 2332468 | -7.9        | -18.9       | -10.9       | 1031799 | -18.0       | -29.7       | -21.3       |
| FR42 | Alsace                              | 1803402 | -5.4        | -11.1       | -2.6        | 867743  | -18.5       | -24.7       | -15.9       |
| FR43 | Franche-Comté                       | 1145744 | -0.5        | -9.3        | -0.4        | 505494  | -10.6       | -21.4       | -12.0       |
| FR51 | Pays de la Loire                    | 3415391 | 3.5         | 11.2        | 21.7        | 1552983 | -6.1        | -1.7        | 9.4         |
| FR52 | Bretagne                            | 3066585 | -5.8        | 8.8         | 19.2        | 1318231 | -12.8       | -1.9        | 9.4         |
| FR53 | Poitou-Charentes                    | 1711307 | -13.7       | 0.5         | 10.5        | 751972  | -20.8       | -9.1        | 1.8         |
| FR61 | Aquitaine                           | 3088196 | -15.6       | 6.4         | 16.9        | 1323181 | -24.3       | -4.0        | 7.4         |
| FR62 | Midi-Pyrénées                       | 2743073 | -13.9       | 11.7        | 22.6        | 1227180 | -23.7       | 0.7         | 12.5        |
| FR63 | Limousin                            | 727487  | -23.8       | -8.7        | 0.7         | 329251  | -30.4       | -16.2       | -5.6        |
| FR71 | Rhône-Alpes                         | 5963736 | 2.5         | 5.8         | 15.7        | 2739049 | -9.3        | -6.9        | 3.5         |
| FR72 | Auvergne                            | 1331779 | -18.0       | -8.1        | 1.2         | 593311  | -25.8       | -17.8       | -7.6        |
| FR81 | Languedoc-Roussillon                | 2497718 | -10.8       | 17.2        | 28.3        | 1011511 | -17.0       | 9.2         | 21.7        |
| FR82 | Provence-Alpes-Côte<br>d'Azur       | 4768564 | -8.1        | 3.1         | 13.0        | 1991131 | -15.5       | -5.1        | 5.7         |
| FR83 | Corse                               | 289092  | -23.3       | 1.1         | 11.3        | 84342   | -33.2       | -8.3        | 3.1         |
| FR91 | Guadeloupe (FR)                     | 399178  | 44.0        | 41.5        | 52.3        | 157335  | 30.4        | 27.3        | 38.3        |
| FR92 | Martinique (FR)                     | 395982  | 6.1         | 5.1         | 14.2        | 154299  | -3.6        | -5.2        | 4.6         |
| FR93 | Guyane (FR)                         | 199206  | 165.1       | 156.9       | 169.0       | 55700   | 145.8       | 137.0       | 149.9       |
| FR94 | Reunion (FR)                        | 772907  | 51.3        | 47.9        | 57.6        | 299720  | 39.9        | 35.9        | 46.0        |
|      | Greece                              |         |             |             |             |         |             |             |             |
| GR11 | Anatoliki Makedonia,<br>Thraki      | 607847  | -27.2       | -3.2        | 9.9         | 261406  | -35.7       | -14.9       | 0.1         |
| GR12 | Kentriki Makedonia                  | 1911508 | -27.8       | -26.9       | -16.7       | 820377  | -40.1       | -41.3       | -30.0       |
| GR13 | Dytiki Makedonia                    | 294508  | -28.8       | -27.4       | -17.3       | 120159  | -37.7       | -34.8       | -22.9       |
| GR14 | Thessalia                           | 737583  | -27.6       | -32.6       | -23.0       | 325173  | -36.0       | -43.4       | -32.2       |
| GR21 | Ipeiros                             | 341851  | -33.2       | -28.6       | -18.6       | 139664  | -43.4       | -33.6       | -21.6       |
| GR22 | Ionia Nisia                         | 220398  | -30.3       | -40.5       | -31.9       | 97900   | -40.5       | -47.7       | -37.8       |
| GR23 | Dytiki Ellada                       | 732292  | -27.8       | -34.9       | -25.8       | 299746  | -39.5       | -43.4       | -32.9       |
| GR24 | Sterea Ellada                       | 558503  | -32.2       | -38.7       | -30.2       | 240364  | -43.2       | -42.0       | -31.7       |
| GR25 | Peloponnisos                        | 598156  | -32.3       | -36.5       | -27.6       | 264251  | -42.1       | -40.8       | -30.1       |
| GR30 | Attiki                              | 3973326 | -29.6       | -26.0       | -15.7       | 1782490 | -46.0       | -42.4       | -31.6       |
| GR41 | Voreio Aigaio                       | 202402  | -30.4       | 17.9        | 33.6        | 76589   | -41.0       | 6.8         | 25.3        |
| GR42 | Notio Aigaio                        | 303114  | -16.4       | -8.4        | 3.7         | 131317  | -32.2       | -24.4       | -11.4       |
| GR43 | Kriti                               | 601263  | -15.0       | -19.1       | -8.2        | 275388  | -28.6       | -34.0       | -21.9       |
|      | Hungary                             |         |             |             |             |         |             |             |             |
| HU10 | Közép-Magyarország                  | 2840972 | -36.7       | -28.4       | -29.1       | 1294486 | -45.7       | -35.8       | -37.1       |
| HU21 | Közép-Dunántúl                      | 1110897 | -35.5       | -35.2       | -36.4       | 486261  | -42.7       | -42.5       | -43.5       |
| HU22 | Nyugat-Dunántúl                     | 1000348 | -38.0       | -35.2       | -33.9       | 448385  | -46.3       | -44.0       | -42.5       |
| HU23 | Dél-Dunántúl                        | 977465  | -37.2       | -43.0       | -42.5       | 382897  | -42.7       | -49.1       | -48.6       |
| HU31 | Észak-Magyarország                  | 1271111 | -32.1       | -46.3       | -46.1       | 472825  | -34.7       | -50.7       | -50.4       |
| HU32 | Észak-Alföld                        | 1541818 | -27.7       | -42.5       | -42.4       | 566344  | -31.6       | -47.8       | -47.6       |
| HU33 | Dél-Alföld                          | 1354938 | -36.9       | -41.0       | -40.5       | 526284  | -42.2       | -47.2       | -46.6       |
|      | Ireland                             |         |             |             |             |         |             |             |             |
| IE01 | Border, Midlands and<br>Western     | 1098144 | 11.6        | 36.9        | 39.0        | 513898  | 3.8         | 25.6        | 28.5        |
| IE02 | Southern and Eastern                | 3011029 | 11.9        | 22.4        | 23.9        | 1480112 | -2.3        | 9.0         | 11.2        |
| IS00 | Iceland                             | 293577  | 18.1        | 7.6         | 11.6        | 173035  | 12.2        | 0.6         | 4.6         |
|      | Italy                               |         |             |             |             |         |             |             |             |
| ITC1 | Piemonte                            | 4330172 | -38.3       | -29.1       | 7.3         | 1911479 | -51.2       | -42.0       | -3.1        |
| ITC2 | Valle d'Aosta/Vallée<br>d'Aoste     | 122868  | -34.5       | -21.2       | 8.0         | 56898   | -49.0       | -37.8       | -8.0        |
| ITC3 | Liguria                             | 1592309 | -46.0       | -31.6       | 1.8         | 649915  | -55.8       | -40.4       | -2.6        |
| ITC4 | Lombardia                           | 9393092 | -31.0       | -17.3       | 26.5        | 4359444 | -46.9       | -33.4       | 12.3        |
| ITD1 | Provincia Autonoma<br>Bolzano-Bozen | 477067  | -15.1       | -7.8        | 23.0        | 228804  | -30.0       | -23.5       | 8.5         |
| ITD2 | Provincia Autonoma<br>Trento        | 497546  | -23.0       | -8.4        | 33.0        | 224380  | -37.7       | -24.7       | 17.2        |
| ITD3 | Veneto                              | 4699950 | -29.4       | -16.5       | 28.1        | 2146075 | -45.9       | -34.1       | 11.7        |
| ITD4 | Friuli-Venezia Giulia               | 1204718 | -40.4       | -27.8       | 4.8         | 523088  | -53.8       | -42.2       | -7.5        |
| ITD5 | Emilia-Romagna                      | 4151369 | -35.9       | -12.2       | 31.7        | 1937107 | -50.5       | -28.5       | 17.6        |
| ITE1 | Toscana                             | 3598269 | -37.3       | -21.4       | 17.1        | 1583398 | -50.8       | -35.5       | 5.9         |
| ITE2 | Umbria                              | 858938  | -34.9       | -14.0       | 34.7        | 364211  | -47.6       | -27.6       | 24.0        |
| ITE3 | Marche                              | 1518780 | -33.1       | -16.3       | 23.5        | 668074  | -46.9       | -31.0       | 11.4        |

Table 1. continued

|             |                                 | Pop     |             |             |             | LF      |             |             |             |
|-------------|---------------------------------|---------|-------------|-------------|-------------|---------|-------------|-------------|-------------|
|             |                                 | 2005    | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005    | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| ITE4        | Lazio                           | 5269972 | -30.4       | -21.1       | 15.5        | 2262497 | -45.1       | -35.3       | 2.8         |
| ITF1        | Abruzzo                         | 1299272 | -32.5       | -21.8       | 6.8         | 528112  | -46.2       | -35.5       | -4.8        |
| ITF2        | Molise                          | 321953  | -34.5       | -36.7       | -20.8       | 121329  | -46.7       | -47.8       | -30.3       |
| ITF3        | Campania                        | 5788986 | -15.4       | -27.6       | -10.0       | 2062117 | -26.7       | -40.3       | -22.7       |
| ITF4        | Puglia                          | 4068167 | -22.2       | -31.7       | -20.9       | 1449118 | -35.3       | -45.5       | -33.4       |
| ITF5        | Basilicata                      | 596546  | -29.0       | -39.8       | -28.3       | 221173  | -41.7       | -51.9       | -39.1       |
| ITF6        | Calabria                        | 2009268 | -24.5       | -39.2       | -22.4       | 714486  | -37.1       | -51.7       | -33.4       |
| ITG1        | Sicilia                         | 5013081 | -20.3       | -30.1       | -17.9       | 1748363 | -30.5       | -41.6       | -27.5       |
| ITG2        | Sardegna                        | 1650052 | -34.4       | -32.5       | -21.3       | 687538  | -52.3       | -50.4       | -38.6       |
| LI00        | Liechtenstein                   | 34600   | -15.4       | -14.5       | -14.8       | 20318   | -30.4       | -30.1       | -29.8       |
| LT00        | Lithuania                       | 3425324 | -33.2       | -42.8       | -44.1       | 1621433 | -35.2       | -45.6       | -46.4       |
| LU00        | Luxembourg (Grand-Duché)        | 461230  | -13.0       | 24.2        | 30.3        | 206250  | -27.0       | 10.2        | 16.3        |
| LV00        | Latvia                          | 2306434 | -37.4       | -42.0       | -49.2       | 1138276 | -40.4       | -44.5       | -51.3       |
| MT00        | Malta                           | 402668  | -19.8       | -20.6       | -28.4       | 161850  | -32.6       | -32.7       | -38.8       |
| Netherlands |                                 |         |             |             |             |         |             |             |             |
| NL11        | Groningen                       | 575072  | -16.9       | -10.6       | 0.9         | 294296  | -29.6       | -21.5       | -9.2        |
| NL12        | Friesland (NL)                  | 642977  | -7.1        | -12.0       | -1.2        | 324538  | -15.0       | -21.9       | -10.4       |
| NL13        | Drenthe                         | 483369  | -12.9       | -10.1       | -1.2        | 243120  | -18.5       | -18.1       | -8.2        |
| NL21        | Overijssel                      | 1109432 | -3.3        | -9.4        | -1.3        | 565136  | -12.2       | -19.7       | -10.8       |
| NL22        | Gelderland                      | 1972010 | -10.6       | -14.5       | -6.5        | 1021554 | -19.1       | -24.6       | -16.0       |
| NL23        | Flevoland                       | 365859  | 12.5        | 10.5        | 23.8        | 193649  | -1.1        | -3.3        | 10.3        |
| NL31        | Utrecht                         | 1171291 | -4.1        | 2.3         | 11.9        | 628941  | -17.4       | -10.2       | -0.1        |
| NL32        | Noord-Holland                   | 2599103 | -12.8       | -6.4        | 7.3         | 1395721 | -25.6       | -18.3       | -4.0        |
| NL33        | Zuid-Holland                    | 3458381 | -10.4       | -15.3       | -2.9        | 1804577 | -21.9       | -25.5       | -12.3       |
| NL34        | Zeeland                         | 379978  | -13.2       | -15.8       | -6.4        | 185499  | -18.7       | -24.1       | -13.7       |
| NL41        | Noord-Brabant                   | 2411359 | -14.0       | -20.1       | -12.6       | 1270794 | -23.8       | -31.0       | -22.8       |
| NL42        | Limburg (NL)                    | 1136695 | -25.6       | -33.7       | -27.6       | 574154  | -33.5       | -43.2       | -36.3       |
| Norway      |                                 |         |             |             |             |         |             |             |             |
| NO01        | Oslo og Akershus                | 1024064 | -2.0        | 9.3         | 25.4        | 559233  | -15.3       | 0.8         | 17.3        |
| NO02        | Hedmark og Oppland              | 371550  | -18.3       | -22.7       | -12.2       | 184108  | -20.7       | -27.8       | -16.4       |
| NO03        | Sør-Østlandet                   | 889058  | -11.8       | -8.1        | 3.7         | 449547  | -16.6       | -15.4       | -2.9        |
| NO04        | Agder og Rogaland               | 657976  | 6.0         | 2.3         | 15.7        | 336219  | 0.1         | -5.3        | 8.6         |
| NO05        | Vestlandet                      | 800064  | 3.8         | -11.7       | 0.2         | 410361  | -1.9        | -19.3       | -6.9        |
| NO06        | Trøndelag                       | 401011  | -1.7        | -1.8        | 10.4        | 201537  | -7.5        | -9.2        | 3.7         |
| NO07        | Nord-Norge                      | 462640  | -5.8        | -27.4       | -15.0       | 234477  | -10.5       | -34.4       | -21.5       |
| Poland      |                                 |         |             |             |             |         |             |             |             |
| PL11        | Łódzkie                         | 2587702 | -35.9       | -39.5       | -38.3       | 1350926 | -44.3       | -47.8       | -46.4       |
| PL12        | Mazowieckie                     | 5145997 | -28.7       | -13.1       | -8.1        | 2310865 | -39.1       | -23.5       | -18.2       |
| PL21        | Malopolskie                     | 3260201 | -21.6       | -16.8       | -10.7       | 1466834 | -31.2       | -26.4       | -19.7       |
| PL22        | Slaskie                         | 4700771 | -34.7       | -64.6       | -66.8       | 2034626 | -45.8       | -73.8       | -75.1       |
| PL31        | Lubelskie                       | 2185156 | -23.8       | -33.1       | -31.2       | 1081165 | -30.8       | -40.5       | -38.5       |
| PL32        | Podkarpackie                    | 2097975 | -19.0       | -27.7       | -24.3       | 889924  | -27.5       | -36.5       | -32.5       |
| PL33        | Swietokrzyskie                  | 1288693 | -29.2       | -38.1       | -36.3       | 616439  | -37.2       | -46.5       | -44.4       |
| PL34        | Podlaskie                       | 1202425 | -25.2       | -37.4       | -34.8       | 500756  | -33.6       | -46.0       | -42.9       |
| PL41        | Wielkopolskie                   | 3365283 | -22.9       | -22.5       | -21.0       | 1535134 | -33.1       | -32.8       | -31.0       |
| PL42        | Zachodniopomorskie              | 1694865 | -28.5       | -35.9       | -34.1       | 715964  | -39.2       | -46.1       | -44.0       |
| PL43        | Lubuskie                        | 1009168 | -26.0       | -31.5       | -27.2       | 491749  | -36.5       | -41.5       | -36.7       |
| PL51        | Dolnoslaskie                    | 2893055 | -33.8       | -41.8       | -40.0       | 1282282 | -44.9       | -51.9       | -49.6       |
| PL52        | Opolskie                        | 1051531 | -34.3       | -74.8       | -72.4       | 407979  | -46.1       | -81.8       | -77.9       |
| PL61        | Kujawsko-Pomorskie              | 2068258 | -25.6       | -34.2       | -33.8       | 953328  | -35.0       | -43.5       | -42.9       |
| PL62        | Warmińsko-Mazurskie             | 1428714 | -20.6       | -42.6       | -42.2       | 604189  | -30.2       | -51.8       | -50.9       |
| PL63        | Pomorskie                       | 2194041 | -20.6       | -30.5       | -29.4       | 853960  | -31.2       | -41.5       | -40.2       |
| Portugal    |                                 |         |             |             |             |         |             |             |             |
| PT11        | Norte                           | 3727310 | -23.1       | -32.1       | -32.6       | 1958166 | -31.7       | -41.0       | -41.4       |
| PT15        | Algarve                         | 411468  | -20.8       | 6.1         | 56.9        | 206849  | -30.6       | -5.3        | 45.3        |
| PT16        | Centro (PT)                     | 2376609 | -30.6       | -32.7       | -27.9       | 1340463 | -37.0       | -39.8       | -34.7       |
| PT17        | Lisboa                          | 2760697 | -21.4       | -19.8       | 4.3         | 1407099 | -31.9       | -29.7       | -5.6        |
| PT18        | Alentejo                        | 767679  | -33.7       | -35.2       | -30.2       | 377725  | -38.7       | -41.0       | -35.7       |
| PT20        | Região Autónoma dos Açores (PT) | 241206  | -9.2        | -18.7       | -15.8       | 109210  | -12.0       | -22.4       | -18.8       |
| PT30        | Região Autónoma da Madeira (PT) | 244286  | -17.5       | -21.1       | -6.2        | 119924  | -22.6       | -26.7       | -11.0       |
| Romania     |                                 |         |             |             |             |         |             |             |             |
| RO11        | Nord-Vest                       | 2742676 | -30.2       | -57.6       | -62.4       | 1187972 | -33.0       | -59.7       | -64.1       |
| RO12        | Centru                          | 2533421 | -28.7       | -65.6       | -71.3       | 1072694 | -33.1       | -67.7       | -72.8       |
| RO21        | Nord-Est                        | 3735512 | -17.8       | -50.8       | -54.9       | 1795589 | -18.7       | -52.7       | -56.6       |
| RO22        | Sud-Est                         | 2849959 | -32.3       | -51.7       | -54.3       | 1253187 | -36.4       | -54.7       | -56.8       |
| RO31        | Sud - Muntenia                  | 3338195 | -34.6       | -45.3       | -45.9       | 1553414 | -37.0       | -47.8       | -48.0       |
| RO32        | Bucuresti - Ilfov               | 2209768 | -39.7       | -37.5       | -21.1       | 1032778 | -48.3       | -41.7       | -23.3       |
| RO41        | Sud-Vest Oltenia                | 2313903 | -36.8       | -51.4       | -53.1       | 1115216 | -38.6       | -53.5       | -54.9       |
| RO42        | Vest                            | 1935094 | -36.9       | -60.6       | -64.6       | 848366  | -40.3       | -62.2       | -65.4       |

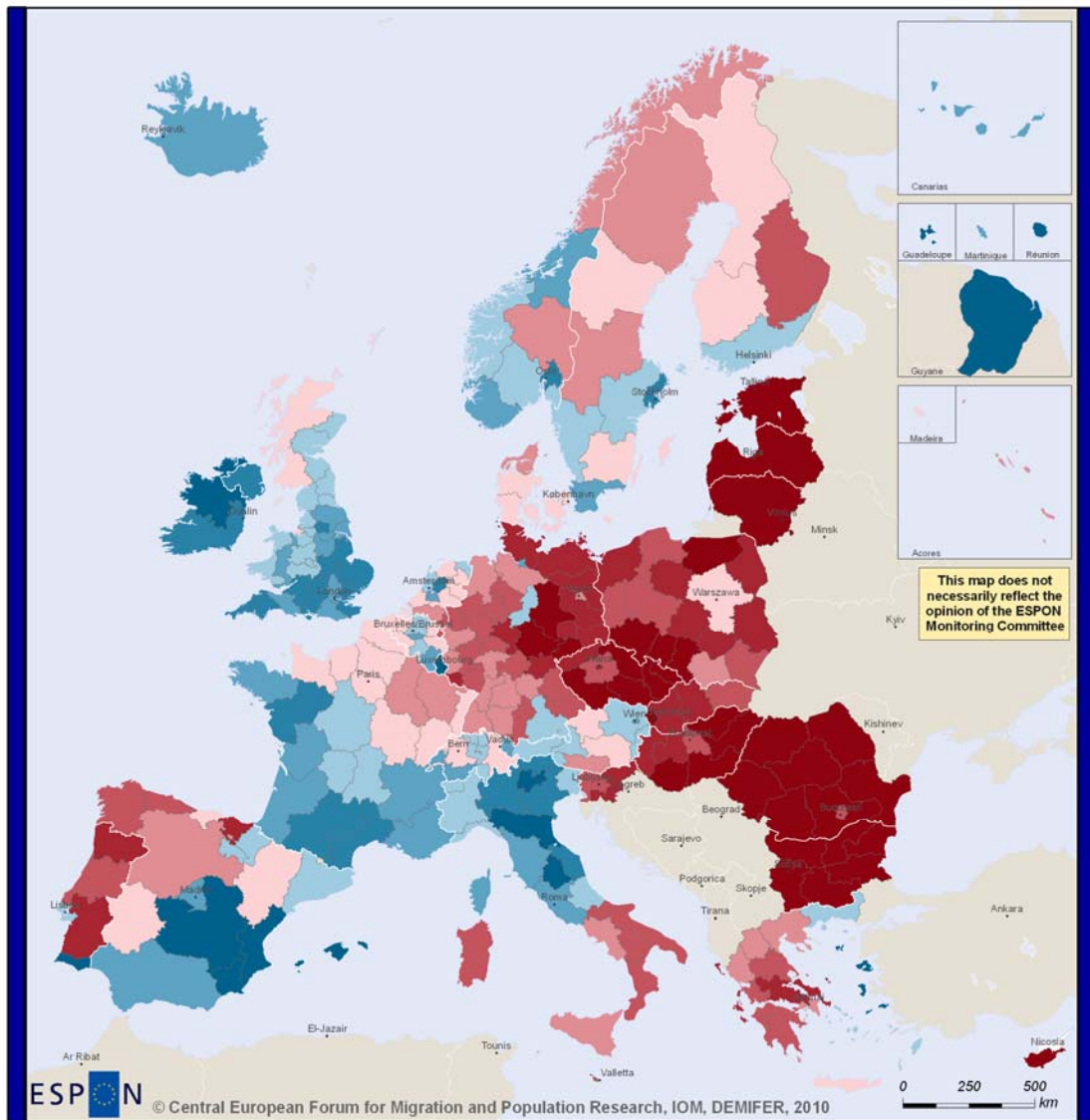


Table 1. continued

|                |  | Pop     |             |             | LF          |         |             |             |             |
|----------------|--|---------|-------------|-------------|-------------|---------|-------------|-------------|-------------|
|                |  | 2005    | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005    | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| Sweden         |  |         |             |             |             |         |             |             |             |
| SE11           | Stockholm  | 1872900 | -3.9        | 5.2         | 25.6        | 1020868 | -16.5       | -3.0        | 18.1        |
| SE12           | Östra Mellansverige                              | 1514549 | -12.5       | -13.6       | 1.8         | 762777  | -17.2       | -19.6       | -3.1        |
| SE21           | Småland med öarna                                | 799739  | -12.1       | -17.2       | -1.5        | 415717  | -14.2       | -21.6       | -4.5        |
| SE22           | Sydsverige                                       | 1311254 | -12.8       | -2.6        | 19.0        | 657655  | -18.7       | -8.4        | 14.6        |
| SE23           | Västsverige                                      | 1805683 | -10.6       | -6.9        | 9.6         | 931023  | -16.6       | -13.4       | 4.3         |
| SE31           | Norra Mellansverige                              | 826188  | -18.3       | -25.2       | -10.8       | 408341  | -19.9       | -29.5       | -13.8       |
| SE32           | Mellersta Norrland                               | 371619  | -17.4       | -23.6       | -9.4        | 185540  | -19.2       | -27.7       | -12.3       |
| SE33           | Övre Norrland                                    | 509460  | -16.4       | -26.9       | -12.5       | 255080  | -20.4       | -33.0       | -17.7       |
| Slovenia       |  |         |             |             |             |         |             |             |             |
| SI01           | Vzhodna Slovenija                                | 1077922 | -34.6       | -36.4       | -32.4       | 541288  | -48.0       | -49.0       | -43.9       |
| SI02           | Zahodna Slovenija                                | 919668  | -28.4       | -27.4       | -21.6       | 464250  | -44.2       | -41.4       | -34.2       |
| Slovakia       |  |         |             |             |             |         |             |             |             |
| SK01           | Bratislavský kraj                                | 601132  | -34.1       | -51.6       | -45.4       | 330587  | -48.9       | -61.2       | -53.7       |
| SK02           | Západné Slovensko                                | 1863940 | -35.3       | -41.1       | -34.7       | 929469  | -46.5       | -50.1       | -42.1       |
| SK03           | Stredné Slovensko                                | 1352497 | -26.9       | -42.5       | -39.8       | 658735  | -36.3       | -50.4       | -46.6       |
| SK04           | Východné Slovensko                               | 1567253 | -13.1       | -25.7       | -22.1       | 730051  | -21.0       | -32.9       | -28.5       |
| United Kingdom |  |         |             |             |             |         |             |             |             |
| UKC1           | Tees Valley and Durham                           | 1153300 | -11.0       | -8.7        | 5.1         | 526925  | -14.9       | -14.5       | 1.2         |
| UKC2           | Northumberland, Tyne and Wear                    | 1394700 | -17.9       | -14.6       | 0.4         | 646779  | -23.4       | -21.1       | -3.9        |
| UKD1           | Cumbria  | 495200  | -20.2       | -10.2       | 2.9         | 256736  | -24.0       | -15.3       | -0.3        |
| UKD2           | Cheshire   | 995500  | -12.4       | -7.8        | 5.3         | 496238  | -18.1       | -15.4       | -0.5        |
| UKD3           | Greater Manchester                               | 2538700 | -3.8        | -9.5        | 9.0         | 1219849 | -11.0       | -16.5       | 4.2         |
| UKD4           | Lancashire                                       | 1443500 | -7.5        | -5.9        | 8.6         | 688386  | -11.6       | -11.0       | 5.4         |
| UKD5           | Merseyside                                       | 1359000 | -13.3       | -19.6       | -7.3        | 621927  | -16.6       | -24.4       | -10.2       |
| UKE1           | East Yorkshire and Northern Lincolnshire         | 897800  | -12.0       | -5.7        | 15.3        | 426287  | -16.8       | -10.6       | 13.3        |
| UKE2           | North Yorkshire                                  | 773300  | -18.4       | -5.0        | 18.0        | 390324  | -24.3       | -11.3       | 15.1        |
| UKE3           | South Yorkshire                                  | 1283800 | -9.9        | -9.2        | 10.8        | 606345  | -16.1       | -16.3       | 6.1         |
| UKE4           | West Yorkshire                                   | 2130400 | -1.5        | -1.7        | 25.1        | 1051787 | -9.2        | -10.0       | 19.5        |
| UKF1           | Derbyshire and Nottinghamshire                   | 2028400 | -13.9       | -6.2        | 14.2        | 991095  | -20.9       | -14.7       | 8.2         |
| UKF2           | Leicestershire, Rutland and Northants            | 1603800 | -4.8        | 0.3         | 25.7        | 826586  | -13.2       | -10.1       | 17.7        |
| UKF3           | Lincolnshire                                     | 678400  | -19.3       | 4.1         | 23.0        | 341639  | -21.9       | 2.1         | 24.1        |
| UKG1           | Herefordshire, Worcestershire and Warks          | 1243700 | -15.1       | -7.5        | 7.7         | 639405  | -20.4       | -14.7       | 2.4         |
| UKG2           | Shropshire and Staffordshire                     | 1507200 | -11.8       | -8.1        | 5.1         | 753115  | -17.4       | -15.0       | -0.1        |
| UKG3           | West Midlands                                    | 2588600 | 4.4         | -12.3       | 9.1         | 1208616 | -1.1        | -18.3       | 5.6         |
| UKH1           | East Anglia                                      | 2255100 | -13.3       | 3.1         | 27.7        | 1142556 | -19.6       | -5.5        | 22.5        |
| UKH2           | Bedfordshire, Hertfordshire                      | 1631800 | -2.6        | -4.4        | 19.5        | 858213  | -11.3       | -14.5       | 11.8        |
| UKH3           | Essex  | 1650700 | -9.8        | -0.2        | 22.9        | 841994  | -15.4       | -7.8        | 18.1        |
| UKI1           | Inner London                                     | 2925500 | 6.0         | -14.3       | 24.7        | 1436209 | -20.1       | -27.2       | 14.0        |
| UKI2           | Outer London                                     | 4497400 | 2.2         | -13.5       | 19.3        | 2297093 | -12.1       | -24.5       | 10.9        |
| UKJ1           | Berkshire, Bucks and Oxfordshire                 | 2134300 | -3.4        | -3.2        | 22.1        | 1170455 | -15.1       | -15.7       | 12.1        |
| UKJ2           | Surrey, East and West Sussex                     | 2589800 | -15.2       | -3.3        | 19.6        | 1307770 | -20.4       | -12.6       | 13.6        |
| UKJ3           | Hampshire and Isle of Wight                      | 1812200 | -12.4       | -0.4        | 21.3        | 941963  | -20.2       | -9.0        | 15.7        |
| UKJ4           | Kent   | 1618600 | -8.1        | -0.7        | 22.6        | 803682  | -12.5       | -8.5        | 17.8        |
| UKK1           | Gloucestershire, Wiltshire and Bristol/Bath area | 2227800 | -11.0       | 2.1         | 24.8        | 1166598 | -19.4       | -7.2        | 18.5        |
| UKK2           | Dorset and Somerset                              | 1210900 | -18.7       | -0.4        | 15.8        | 591090  | -20.3       | -3.9        | 15.6        |
| UKK3           | Cornwall and Isles of Scilly                     | 520800  | -22.0       | 7.4         | 23.6        | 248190  | -23.8       | 6.1         | 25.1        |
| UKK4           | Devon  | 1106200 | -18.3       | 6.8         | 27.7        | 528775  | -22.0       | 3.1         | 27.6        |
| UKL1           | West Wales and The Valleys                       | 1877600 | -13.2       | -3.8        | 7.6         | 839097  | -15.1       | -7.0        | 6.3         |
| UKL2           | East Wales                                       | 1072500 | -10.4       | -2.9        | 12.8        | 532466  | -15.8       | -9.1        | 8.8         |
| UKM2           | Eastern Scotland                                 | 1933520 | -20.1       | -10.0       | 9.5         | 1002389 | -27.2       | -16.9       | 5.3         |
| UKM3           | South Western Scotland                           | 2262930 | -20.6       | -23.4       | -9.4        | 1043776 | -25.9       | -29.0       | -13.1       |
| UKM5           | North Eastern Scotland                           | 439340  | -22.3       | -20.9       | 0.5         | 237057  | -29.6       | -27.9       | -4.0        |
| UKM6           | Highlands and Islands                            | 459010  | -17.0       | -23.8       | -9.3        | 293390  | -22.2       | -31.5       | -15.3       |
| UKN0           | Northern Ireland                                 | 1724408 | 2.9         | 2.1         | 21.4        | 773160  | -2.2        | -4.0        | 17.4        |

**Map 1. Population change 2005-2050, NUTS2, Status Quo (STQ) projection, 2005-2050**

## Change in Population in 2005-2050, STQ Scenario

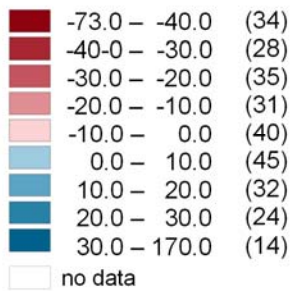


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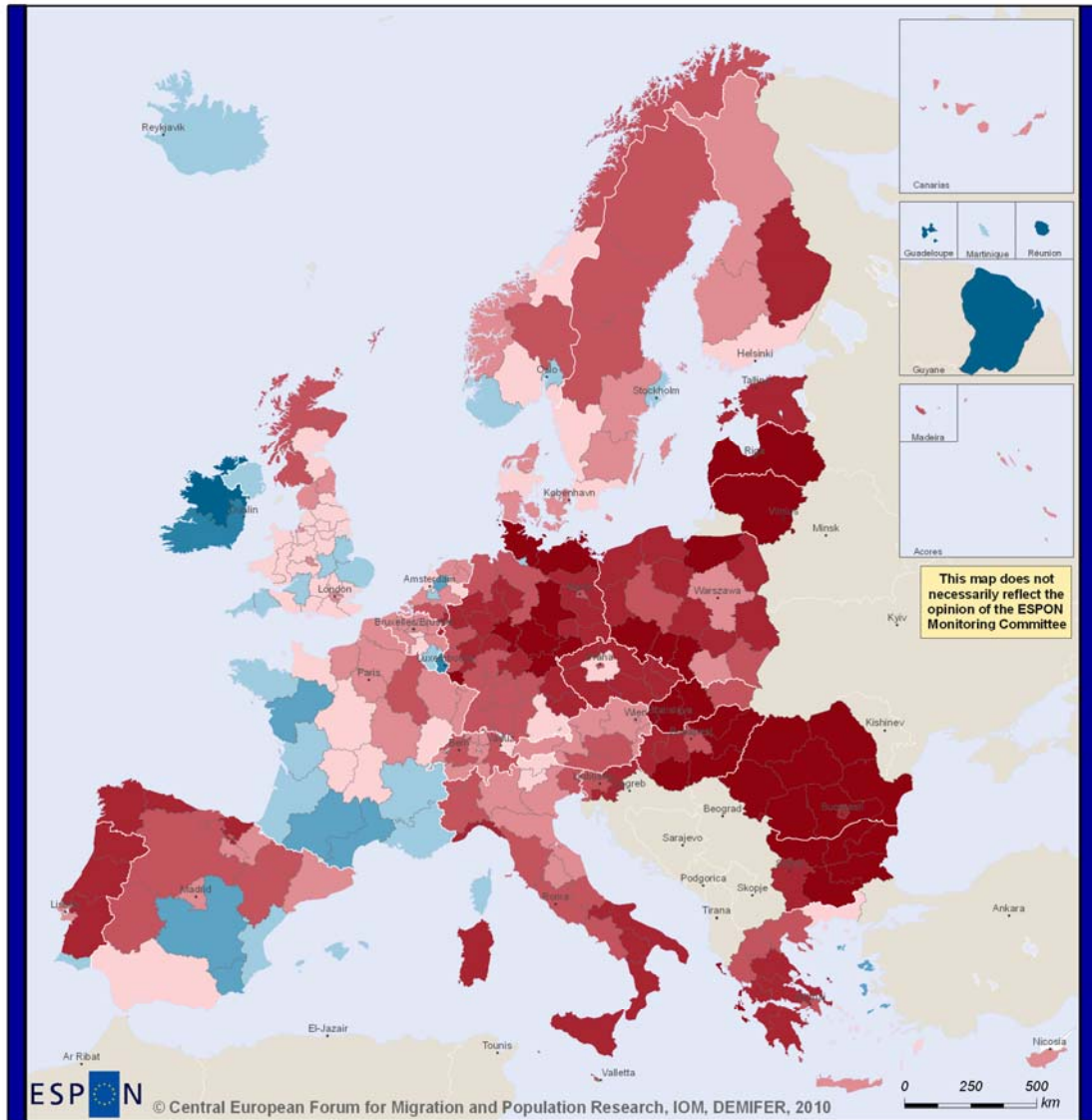
Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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Change in Population in 2005-2050 in %  
after "Status Quo (STQ)" Scenario



**Map 2. Population change 2005-2050, NUTS2, No extra-Europe migration (NEM) simulation, 2005-2050**

## Change in Population in 2005-2050, NEM Scenario



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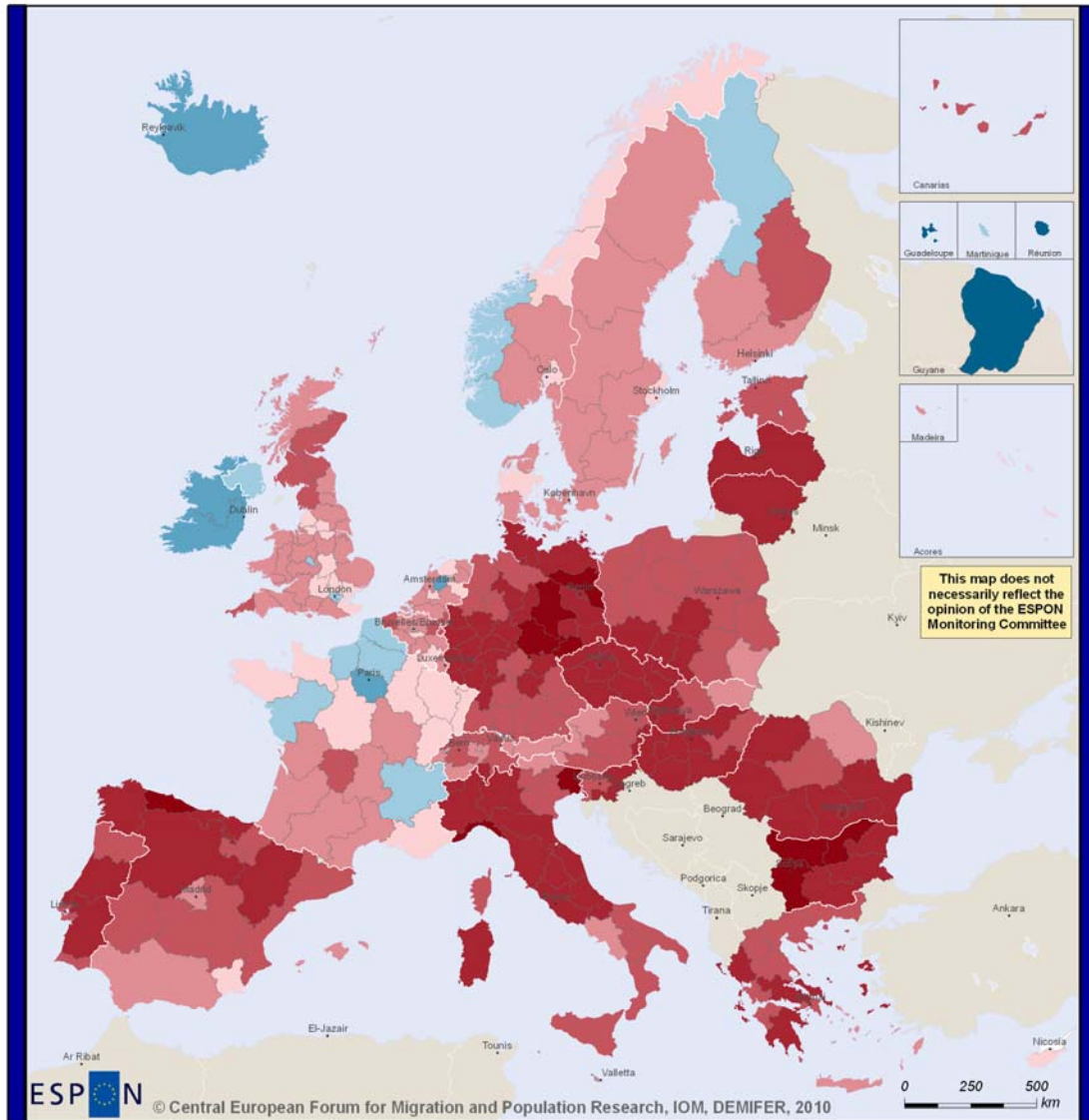
Regional level: NUTS 2  
 Source: ESPON 2013 Database, 2010  
 Origin of data: Eurostat, NSIs, Estimations, 2010  
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**Change in Population in 2005-2050 in % after "No Non-European Migration (NEM)" Scenario**

|                 |               |      |
|-----------------|---------------|------|
| Dark Red        | -75.0 – -40.0 | (34) |
| Red             | -40.0 – -30.0 | (53) |
| Dark Red-Orange | -30.0 – -20.0 | (54) |
| Red-Orange      | -20.0 – -10.0 | (64) |
| Light Red       | -10.0 – 0.0   | (45) |
| Light Blue      | 0.0 – 10.0    | (24) |
| Blue            | 10.0 – 20.0   | (7)  |
| Dark Blue       | 20.0 – 30.0   | (2)  |
| Very Dark Blue  | 30.0 – 157.0  | (4)  |
| White           | no data       |      |

**Map 3. Population change 2005-2050, NUTS2, No migration (NMI) simulation, 2005-2050**

### Change in Population in 2005-2050, NMI Scenario



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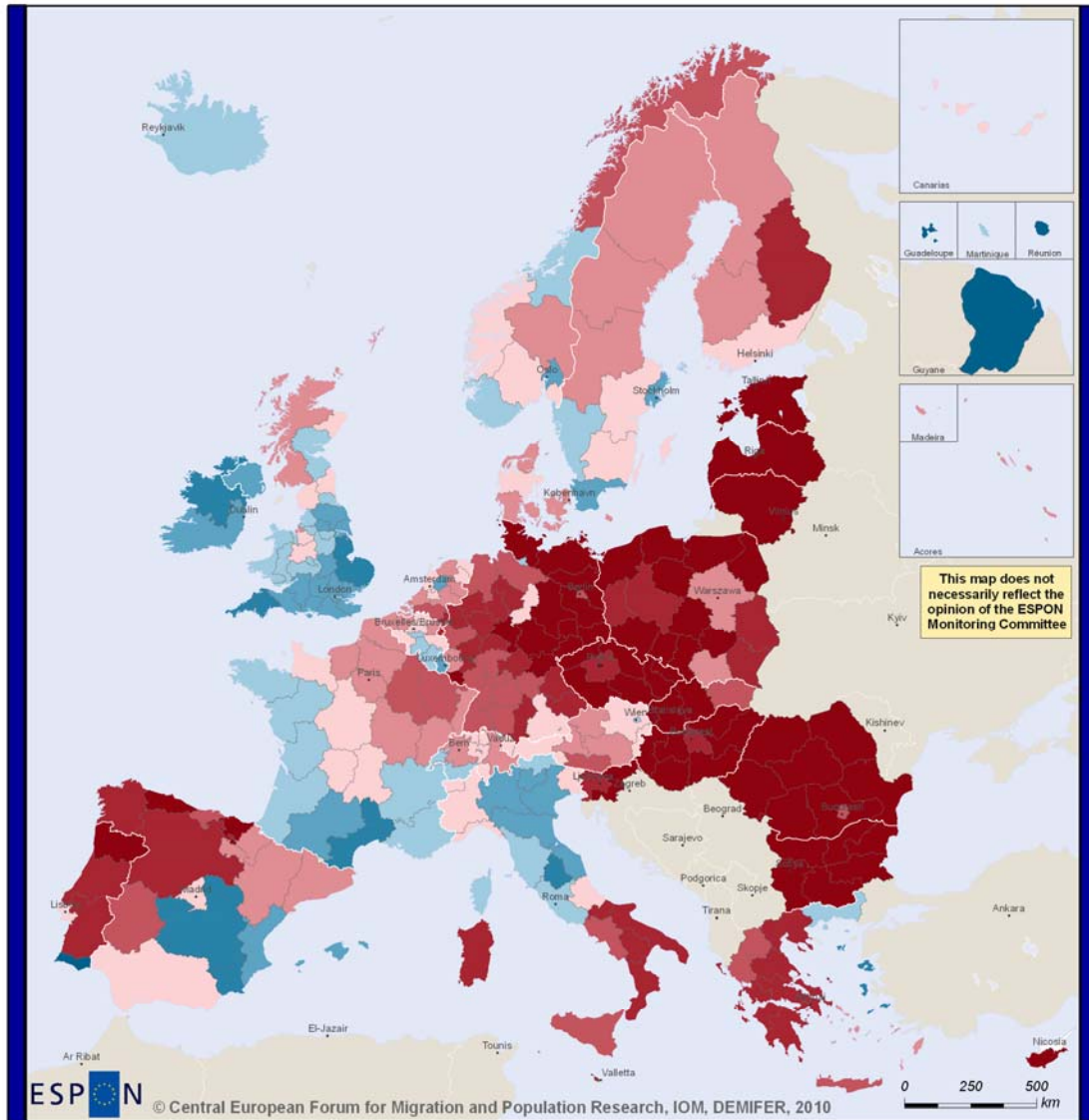
Regional level: NUTS 2  
 Source: ESPON 2013 Database, 2010  
 Origin of data: Eurostat, NSIs, Estimations, 2010  
 © EuroGeographics Association for administrative boundaries

**Change in Population in 2005-2050 in % after "No Migration (NMI)" Scenario**

|                 |               |      |
|-----------------|---------------|------|
| Dark Red        | -46.0 – -40.0 | (10) |
| Red             | -40.0 – -30.0 | (80) |
| Dark Red-Orange | -30.0 – -20.0 | (69) |
| Red-Orange      | -20.0 – -10.0 | (74) |
| Light Red       | -10.0 – 0.0   | (30) |
| Light Blue      | 0.0 – 10.0    | (15) |
| Blue            | 10.0 – 20.0   | (6)  |
| Dark Blue       | 20.0 – 30.0   | (0)  |
| Very Dark Blue  | 30.0 – 166.0  | (3)  |
| White           | no data       |      |

**Map 4. Labour force change 2005-2050, NUTS2, Status Quo (STQ) projection, 2005-2050**

### Change in Labour Force in 2005-2050, STQ Scenario



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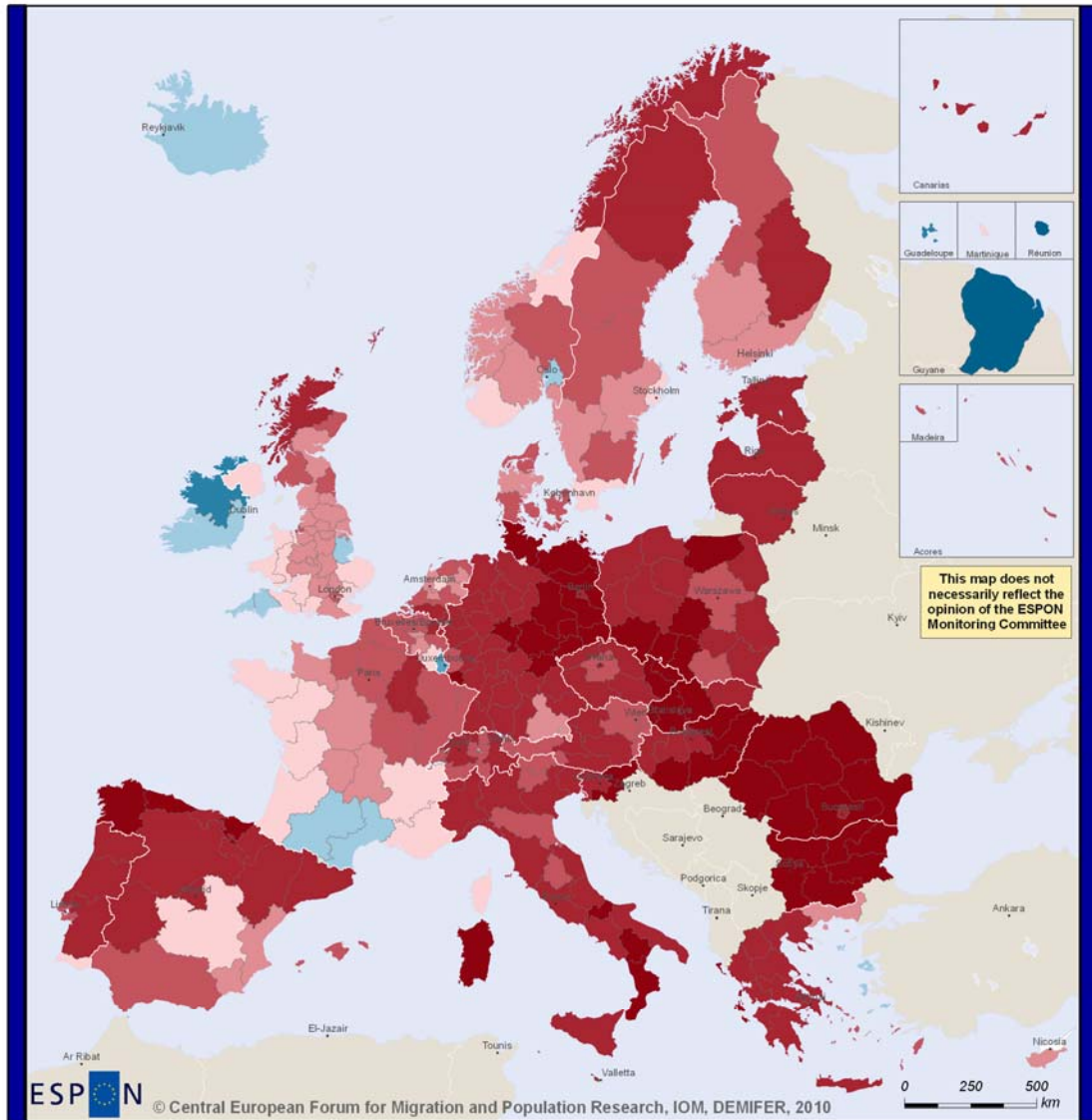
Regional level: NUTS 2  
 Source: ESPON 2013 Database, 2010  
 Origin of data: Eurostat, NSIs, Estimations, 2010  
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**Change in Labour Force in 2005-2050 in % after "Status Quo (STQ)" Scenario**

|  |               |      |
|--|---------------|------|
|  | -78.0 – -40.0 | (60) |
|  | -40.0 – -30.0 | (37) |
|  | -30.0 – -20.0 | (27) |
|  | -20.0 – -10.0 | (44) |
|  | -10.0 – 0.0   | (43) |
|  | 0.0 – 10.0    | (33) |
|  | 10.0 – 20.0   | (29) |
|  | 20.0 – 30.0   | (10) |
|  | 30.0 – 150.0  | (4)  |
|  | no data       |      |

**Map 5. Labour force change 2005-2050, NUTS2, No extra-Europe migration (NEM) simulation, 2005-2050**

### Change in Labour Force in 2005-2050, NEM Scenario



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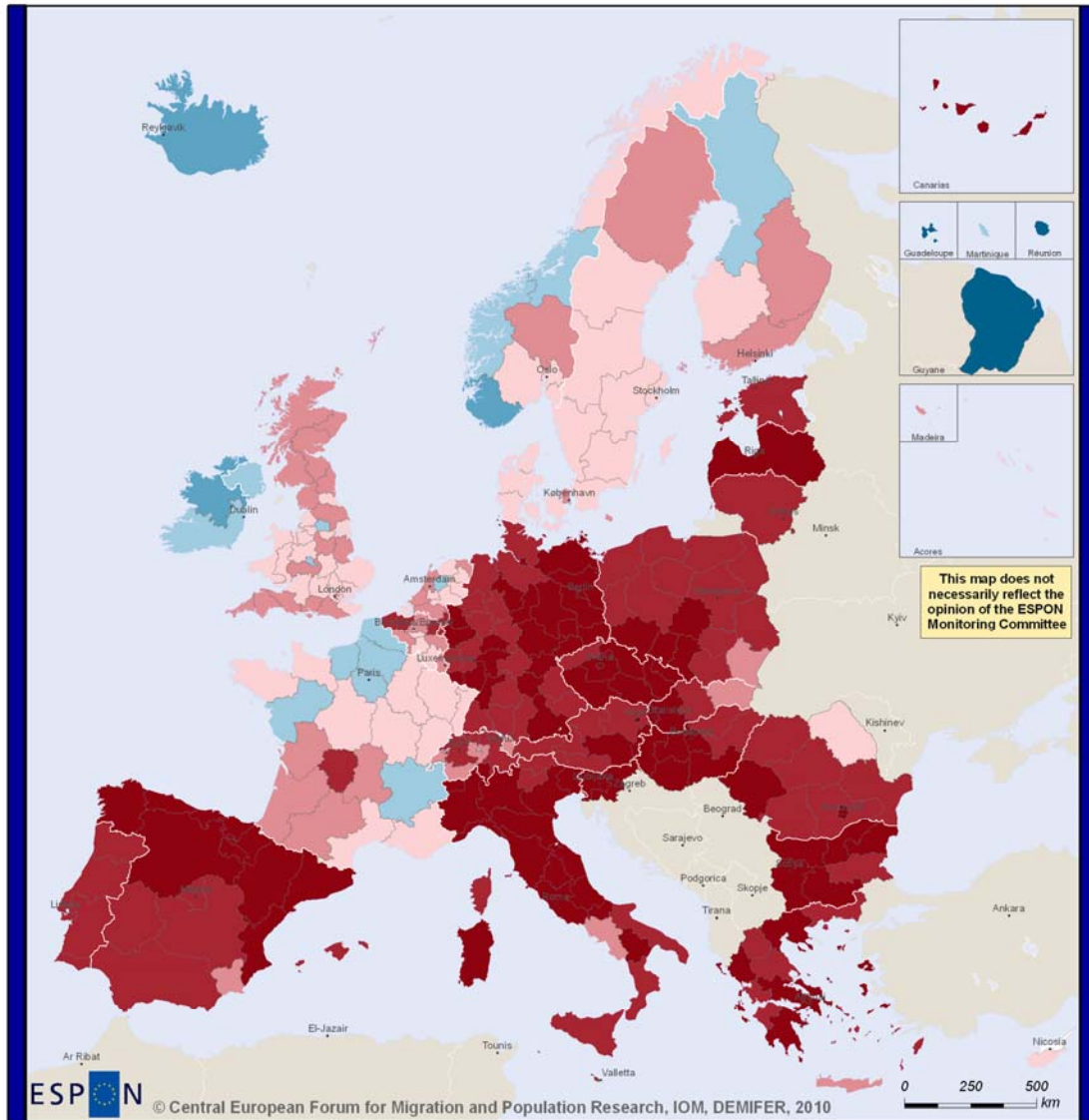
Regional level: NUTS 2  
 Source: ESPON 2013 Database, 2010  
 Origin of data: Eurostat, NSIs, Estimations, 2010  
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**Change in Labour Force in 2005-2050 in % after "No Non-European Migration (NEM)" Scenario**

|  |               |      |
|--|---------------|------|
|  | -82.0 – -40.0 | (91) |
|  | -40.0 – -30.0 | (56) |
|  | -30.0 – -20.0 | (60) |
|  | -20.0 – -10.0 | (40) |
|  | -10.0 – 0.0   | (26) |
|  | 0.0 – 10.0    | (9)  |
|  | 10.0 – 20.0   | (1)  |
|  | 20.0 – 30.0   | (2)  |
|  | 30.0 – 137.0  | (2)  |
|  | no data       |      |

**Map 6. Labour force change 2005-2050, NUTS2, No migration (NMI) simulation, 2005-2050**

### Change in Labour Force in 2005-2050, NMI Scenario



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Regional level: NUTS 2  
 Source: ESPON 2013 Database, 2010  
 Origin of data: Eurostat, NSIs, Estimations, 2010  
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**Change in Labour Force in 2005-2050 in % after "No Migration (NMI)" Scenario**

|                 |               |      |
|-----------------|---------------|------|
| Dark Red        | -62.0 – -40.0 | (88) |
| Red             | -40.0 – -30.0 | (76) |
| Dark Red-Orange | -30.0 – -20.0 | (44) |
| Red-Orange      | -20.0 – -10.0 | (56) |
| Light Red       | -10.0 – 0.0   | (17) |
| Light Blue      | 0.0 – 10.0    | (2)  |
| Blue            | 10.0 – 20.0   | (1)  |
| Dark Blue       | 20.0 – 30.0   | (0)  |
| Very Dark Blue  | 30.0 – 146.0  | (3)  |
| White           | no data       |      |

## Appendix B. Impact of migration on population change: tables and figures

**Table 2. Population change components and impact of migration in the *Status Quo* projection**

|                |                                     |                                   |                                  | Comp.                    |  |  | Impact                           |  |  |       |
|----------------|-------------------------------------|-----------------------------------|----------------------------------|--------------------------|--|--|----------------------------------|--|--|-------|
|                | Popula-<br>tion<br>2005<br>(1000)   | Popula-<br>tion<br>2050<br>(1000) | Popula-<br>tion<br>change<br>(%) | Natural<br>change<br>(%) | Intra-<br>Europe<br>migra-<br>tion (%) | Extra-<br>Europe<br>migra-<br>tion (%) | "No<br>migra-<br>tion"<br>effect | "Intra-<br>Europe<br>migra-<br>tion"<br>effect | "Extra-<br>Europe<br>migra-<br>tion"<br>effect |       |
| Austria        |                                     |                                   |                                  |                          |  |  |                                  |  |  |       |
| AT11           | Burgenland (A)                      | 278.0                             | 281.1                            | 1.1                      | -32.3                                  | 24.6                                   | 8.8                              | -34.4  | 19.4   | 16.1  |
| AT12           | Niederösterreich                    | 1568.9                            | 1669.5                           | 6.4                      | -23.3                                  | 21.6                                   | 8.1                              | -25.8  | 15.0   | 17.2  |
| AT13           | Wien                                | 1632.6                            | 1909.1                           | 16.9                     | -10.0                                  | -1.8                                   | 28.8                             | -27.4  | 16.8   | 27.6  |
| AT21           | Kärnten                             | 558.9                             | 463.2                            | -17.1                    | -26.7                                  | 1.9                                    | 7.7                              | -27.5  | -1.2   | 11.6  |
| AT22           | Steiermark                          | 1196.8                            | 1103.8                           | -7.8                     | -24.7                                  | 6.7                                    | 10.2                             | -28.9  | 6.9  | 14.2  |
| AT31           | Oberösterreich                      | 1394.7                            | 1348.8                           | -3.3                     | -16.0                                  | -0.2                                   | 12.9                             | -18.9  | -1.1   | 16.7  |
| AT32           | Salzburg                            | 522.4                             | 526.8                            | 0.8                      | -12.5                                  | -2.3                                   | 15.6                             | -19.7  | 1.4  | 19.1  |
| AT33           | Tirol                               | 689.0                             | 755.1                            | 9.6                      | -9.4                                   | 1.8                                    | 17.1                             | -18.0  | 6.3  | 21.3  |
| AT34           | Vorarlberg                          | 360.1                             | 397.1                            | 10.3                     | -1.9                                   | -1.6                                   | 13.9                             | -10.9  | 1.7  | 19.5  |
| Belgium        |                                     |                                   |                                  |                          |  |  |                                  |  |  |       |
| Brussels       |                                     |                                   |                                  |                          |  |  |                                  |  |  |       |
| BE10           | Hoofdstedelijk Gewest               | 1006.7                            | 1088.6                           | 8.1                      | 12.4                                   | -46.2                                  | 41.9                             | 6.3  | -26.4  | 28.2  |
| BE21           | Prov. Antwerpen                     | 1676.9                            | 1687.9                           | 0.7                      | -12.6                                  | 0.4                                    | 12.8                             | -15.1  | 0.7  | 15.0  |
| BE22           | Prov. Limburg (B)                   | 809.9                             | 786.7                            | -2.9                     | -20.7                                  | 6.2                                    | 11.6                             | -21.6  | 4.9  | 13.9  |
| BE23           | Prov. Oost-Vlaanderen               | 1380.1                            | 1371.6                           | -0.6                     | -17.2                                  | 10.4                                   | 6.2                              | -19.0  | 8.7  | 9.8   |
| BE24           | Prov. Vlaams Brabant<br>Prov. West- | 1037.8                            | 1086.8                           | 4.7                      | -15.7                                  | 12.4                                   | 8.0                              | -17.8  | 6.6  | 16.0  |
| BE25           | Vlaanderen                          | 1138.5                            | 1036.8                           | -8.9                     | -20.5                                  | 6.9                                    | 4.7                              | -21.8  | 5.4  | 7.5   |
| BE31           | Prov. Brabant Wallon                | 363.8                             | 410.3                            | 12.8                     | -11.2                                  | 15.5                                   | 8.5                              | -9.4   | 4.8  | 17.4  |
| BE32           | Prov. Hainaut                       | 1286.3                            | 1266.2                           | -1.6                     | -16.3                                  | 6.5                                    | 8.3                              | -16.2  | 2.5  | 12.0  |
| BE33           | Prov. Liège                         | 1034.0                            | 1022.7                           | -1.1                     | -15.1                                  | 4.4                                    | 9.5                              | -15.9  | 2.7  | 12.1  |
| BE34           | Prov. Luxembourg (B)                | 256.0                             | 293.6                            | 14.7                     | -3.6                                   | 10.2                                   | 8.1                              | -5.2   | 7.7  | 12.2  |
| BE35           | Prov. Namur                         | 455.9                             | 493.4                            | 8.2                      | -9.8                                   | 12.5                                   | 5.5                              | -10.9  | 8.0  | 11.1  |
| Bulgaria       |                                     |                                   |                                  |                          |  |  |                                  |  |  |       |
| BG31           | Severozapaden                       | 974.7                             | 401.2                            | -58.8                    | -41.0                                  | -16.0                                  | -1.8                             | -42.2  | -15.7  | -0.9  |
| BG32           | Severen tsentralen                  | 958.8                             | 445.8                            | -53.5                    | -43.9                                  | -7.5                                   | -2.1                             | -44.3  | -8.0   | -1.2  |
| BG33           | Severozitochen                      | 1001.7                            | 527.5                            | -47.3                    | -37.1                                  | -7.8                                   | -2.5                             | -35.7  | -10.0  | -1.6  |
| BG34           | Yugoiztochen                        | 1139.9                            | 610.0                            | -46.5                    | -35.6                                  | -8.5                                   | -2.4                             | -33.1  | -11.8  | -1.6  |
| BG41           | Yugozapaden                         | 2114.8                            | 1233.6                           | -41.7                    | -40.8                                  | 1.7                                    | -2.5                             | -41.3  | 1.3  | -1.7  |
| BG42           | Yuzhen tsentralen                   | 1571.2                            | 836.8                            | -46.7                    | -37.5                                  | -6.9                                   | -2.4                             | -38.0  | -7.3   | -1.5  |
| Switzerland    |                                     |                                   |                                  |                          |  |  |                                  |  |  |       |
| CH01           | Région lémanique                    | 1362.8                            | 1565.8                           | 14.9                     | -9.6                                   | -2.8                                   | 27.3                             | -17.3  | 3.4  | 28.8  |
| CH02           | Espace Mittelland                   | 1690.1                            | 1644.5                           | -2.7                     | -20.8                                  | 4.9                                    | 13.2                             | -22.7  | 1.9  | 18.1  |
| CH03           | Nordwestschweiz                     | 1017.2                            | 1036.8                           | 1.9                      | -20.6                                  | 7.9                                    | 14.6                             | -24.6  | 7.2  | 19.3  |
| CH04           | Zürich                              | 1261.8                            | 1373.8                           | 8.9                      | -13.6                                  | 3.6                                    | 18.8                             | -22.5  | 8.7  | 22.6  |
| CH05           | Ostschweiz                          | 1059.6                            | 1016.6                           | -4.1                     | -20.3                                  | 1.2                                    | 15.0                             | -21.1  | -1.7   | 18.7  |
| CH06           | Zentralschweiz                      | 703.7                             | 750.0                            | 6.6                      | -13.8                                  | 7.1                                    | 13.3                             | -17.2  | 4.9  | 18.9  |
| CH07           | Ticino                              | 319.9                             | 333.5                            | 4.2                      | -25.5                                  | 12.8                                   | 16.9                             | -31.5  | 14.5   | 21.3  |
| CY00           | Cyprus                              | 749.2                             | 412.4                            | -45.0                    | -17.6                                  | 18.7                                   | -46.0                            | -9.7   | -2.7   | -32.5 |
| Czech Republic |                                     |                                   |                                  |                          |  |  |                                  |  |  |       |
| CZ01           | Praha                               | 1170.6                            | 725.1                            | -38.1                    | -24.5                                  | 6.7                                    | -20.3                            | -34.7  | 5.4  | -8.7  |
| CZ02           | Střední Čechy                       | 1144.1                            | 873.6                            | -23.6                    | -27.8                                  | 25.3                                   | -21.1                            | -30.9  | 21.3   | -14.0 |
| CZ03           | Jihozápad                           | 1175.3                            | 697.9                            | -40.6                    | -30.3                                  | 2.7                                    | -13.0                            | -32.3  | 0.6  | -8.9  |
| CZ04           | Severozápad                         | 1126.7                            | 754.2                            | -33.1                    | -26.8                                  | -6.1                                   | -0.2                             | -30.0  | -5.2   | 2.1   |
| CZ05           | Severovýchod                        | 1480.1                            | 807.8                            | -45.4                    | -28.4                                  | -0.4                                   | -16.6                            | -30.4  | -3.5   | -11.6 |
| CZ06           | Jihovýchod                          | 1640.4                            | 963.3                            | -41.3                    | -28.5                                  | -2.3                                   | -10.5                            | -30.7  | -3.8   | -6.8  |
| CZ07           | Střední Morava                      | 1225.8                            | 650.4                            | -46.9                    | -29.7                                  | -3.3                                   | -13.9                            | -32.2  | -5.3   | -9.5  |
| CZ08           | Moravskoslezsko                     | 1257.6                            | 716.6                            | -43.0                    | -29.9                                  | -6.6                                   | -6.5                             | -31.9  | -7.5   | -3.6  |
| Germany        |                                     |                                   |                                  |                          |  |  |                                  |  |  |       |
| DE11           | Stuttgart                           | 4003.2                            | 3216.8                           | -19.6                    | -22.8                                  | -3.1                                   | 6.2                              | -25.8  | -2.0   | 8.2   |
| DE12           | Karlsruhe                           | 2727.7                            | 2238.4                           | -17.9                    | -27.8                                  | 0.7                                    | 9.1                              | -30.2  | 2.4  | 9.8   |
| DE13           | Freiburg                            | 2185.0                            | 1847.9                           | -15.4                    | -25.2                                  | 3.5                                    | 6.2                              | -26.3  | 2.3  | 8.6   |
| DE14           | Tübingen                            | 1801.5                            | 1482.6                           | -17.7                    | -23.0                                  | -1.9                                   | 7.3                              | -23.2  | -3.3   | 8.8   |
| DE21           | Oberbayern                          | 4211.1                            | 4418.5                           | 4.9                      | -19.0                                  | 16.5                                   | 7.5                              | -27.6  | 22.3   | 10.2  |
| DE22           | Niederbayern                        | 1196.2                            | 886.6                            | -25.9                    | -28.6                                  | -3.1                                   | 5.8                              | -28.7  | -4.4   | 7.3   |
| DE23           | Oberpfalz                           | 1090.3                            | 805.0                            | -26.2                    | -29.6                                  | -1.1                                   | 4.5                              | -30.0  | -2.5   | 6.3   |
| DE24           | Oberfranken                         | 1106.5                            | 702.9                            | -36.5                    | -35.4                                  | -4.3                                   | 3.2                              | -34.9  | -6.6   | 5.0   |
| DE25           | Mittelfranken                       | 1709.0                            | 1375.9                           | -19.5                    | -29.3                                  | 2.9                                    | 6.9                              | -31.8  | 4.1  | 8.2   |
| DE26           | Unterfranken                        | 1344.6                            | 982.8                            | -26.9                    | -30.9                                  | -0.9                                   | 4.8                              | -29.4  | -4.0   | 6.5   |
| DE27           | Schwaben                            | 1786.2                            | 1399.8                           | -21.6                    | -25.9                                  | -0.1                                   | 4.4                              | -25.9  | -2.6   | 6.8   |



Table 2. continued

|      |                                 | Popula-<br>tion<br>2005<br>(1000) | Popula-<br>tion<br>2050<br>(1000) | Popula-<br>tion<br>change<br>(%) | Natural<br>change<br>(%) | Intra-<br>Europe<br>migra-<br>tion (%) | Extra-<br>Europe<br>migra-<br>tion (%) | "No<br>migra-<br>tion"<br>effect | "Intra-<br>Europe<br>migra-<br>tion"<br>effect | "Extra-<br>Europe<br>migra-<br>tion"<br>effect |
|------|---------------------------------|-----------------------------------|-----------------------------------|----------------------------------|--------------------------|--|--|----------------------------------|--|--|
| DE30 | Berlin                          | 3387.8                            | 2830.9                            | -16.4                            | -27.9                    | 0.6                                    | 10.9                                   | -36.0                            | 8.9  | 10.7   |
| DE41 | Brandenburg - Nordost           | 1163.9                            | 791.6                             | -32.0                            | -43.4                    | 7.3                                    | 4.1                                    | -40.7                            | 2.2  | 6.5  |
| DE42 | Brandenburg - Südwest           | 1403.8                            | 927.9                             | -33.9                            | -41.0                    | 5.2                                    | 2.0                                    | -39.7                            | 0.7  | 5.1  |
| DE50 | Bremen                          | 663.2                             | 564.4                             | -14.9                            | -29.7                    | 6.3                                    | 8.5                                    | -36.5                            | 12.3   | 9.3  |
| DE60 | Hamburg                         | 1734.8                            | 2039.1                            | 17.5                             | -22.5                    | 34.5                                   | 5.6                                    | -33.1                            | 41.0   | 9.6  |
| DE71 | Darmstadt                       | 3775.0                            | 3177.3                            | -15.8                            | -23.6                    | -0.8                                   | 8.5                                    | -30.2                            | 4.7  | 9.8  |
| DE72 | Gießen                          | 1064.2                            | 758.4                             | -28.7                            | -30.5                    | -3.2                                   | 5.0                                    | -30.3                            | -5.3   | 6.8  |
| DE73 | Kassel                          | 1258.5                            | 838.6                             | -33.4                            | -32.6                    | -5.4                                   | 4.7                                    | -31.9                            | -8.2   | 6.7  |
| DE80 | Mecklenburg-Vorpommern          | 1719.7                            | 1072.9                            | -37.6                            | -41.2                    | 0.5                                    | 3.1                                    | -38.7                            | -3.7   | 4.7  |
| DE91 | Braunschweig                    | 1658.9                            | 1732.4                            | 4.4                              | -28.0                    | -15.0                                  | 47.5                                   | -34.5                            | 6.9  | 32.0   |
| DE92 | Hannover                        | 2166.6                            | 1685.9                            | -22.2                            | -31.1                    | 4.0                                    | 4.9                                    | -33.2                            | 2.9  | 8.2  |
| DE93 | Lüneburg                        | 1703.0                            | 1418.3                            | -16.7                            | -29.1                    | 9.2                                    | 3.2                                    | -28.6                            | 5.2  | 6.7  |
| DE94 | Weser-Ems                       | 2472.4                            | 2072.5                            | -16.2                            | -23.5                    | -0.3                                   | 7.7                                    | -23.0                            | -2.3   | 9.1  |
| DEA1 | Düsseldorf                      | 5237.9                            | 3939.1                            | -24.8                            | -30.2                    | 0.4                                    | 5.0                                    | -34.0                            | 2.5  | 6.7  |
| DEA2 | Köln                            | 4363.8                            | 3631.0                            | -16.8                            | -26.7                    | 4.0                                    | 5.9                                    | -30.1                            | 5.5  | 7.8  |
| DEA3 | Münster                         | 2624.5                            | 1963.8                            | -25.2                            | -27.6                    | -1.9                                   | 4.4                                    | -27.4                            | -3.9   | 6.1  |
| DEA4 | Detmold                         | 2072.5                            | 1548.9                            | -25.3                            | -24.4                    | -4.4                                   | 3.6                                    | -23.5                            | -7.5   | 5.7  |
| DEA5 | Arnsberg                        | 3776.7                            | 2652.3                            | -29.8                            | -30.3                    | -5.7                                   | 6.2                                    | -32.1                            | -4.9   | 7.3  |
| DEB1 | Koblenz                         | 1527.5                            | 1083.6                            | -29.1                            | -30.7                    | -2.3                                   | 3.9                                    | -31.2                            | -3.8   | 5.9  |
| DEB2 | Trier                           | 513.9                             | 451.5                             | -12.1                            | -28.5                    | 9.2                                    | 7.1                                    | -30.6                            | 9.7  | 8.8  |
| DEB3 | Rheinhausen-Pfalz               | 2019.7                            | 1609.4                            | -20.3                            | -31.3                    | 5.2                                    | 5.8                                    | -32.7                            | 4.5  | 7.9  |
| DEC0 | Saarland                        | 1056.4                            | 640.1                             | -39.4                            | -40.1                    | -4.6                                   | 5.3                                    | -39.9                            | -5.7   | 6.2  |
| DED1 | Chemnitz                        | 1553.4                            | 744.0                             | -52.1                            | -45.0                    | -9.7                                   | 2.6                                    | -42.1                            | -13.3  | 3.4  |
| DED2 | Dresden                         | 1667.7                            | 1126.5                            | -32.4                            | -37.4                    | 0.5                                    | 4.5                                    | -36.4                            | -1.8   | 5.7  |
| DED3 | Leipzig                         | 1075.2                            | 736.0                             | -31.6                            | -38.7                    | 3.3                                    | 3.9                                    | -39.6                            | 2.5  | 5.6  |
| DEE0 | Sachsen-Anhalt                  | 2494.4                            | 1248.4                            | -50.0                            | -43.8                    | -9.6                                   | 3.5                                    | -43.3                            | -11.3  | 4.6  |
| DEF0 | Schleswig-Holstein              | 2828.8                            | 1736.5                            | -38.6                            | -32.3                    | -10.7                                  | 4.4                                    | -31.8                            | -12.3  | 5.5  |
| DEG0 | Thüringen                       | 2355.3                            | 1208.7                            | -48.7                            | -43.1                    | -8.1                                   | 2.5                                    | -40.8                            | -11.7  | 3.8  |
|      | Denmark                         |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| DK01 | Hovedstaden                     | 1631.6                            | 1515.8                            | -7.1                             | -8.1                     | -4.0                                   | 5.0                                    | -15.1                            | 0.4  | 7.5  |
| DK02 | Sjælland                        | 806.0                             | 760.8                             | -5.6                             | -19.3                    | 11.2                                   | 2.5                                    | -13.1                            | 1.4  | 6.1  |
| DK03 | Syddanmark                      | 1183.8                            | 1069.3                            | -9.7                             | -16.2                    | 2.2                                    | 4.3                                    | -10.9                            | -5.6   | 6.8  |
| DK04 | Midtjylland                     | 1212.8                            | 1204.0                            | -0.7                             | -7.1                     | 1.4                                    | 5.0                                    | -6.1                             | -2.3   | 7.6  |
| DK05 | Nordjylland                     | 577.3                             | 504.8                             | -12.6                            | -15.2                    | -2.2                                   | 4.8                                    | -11.5                            | -8.0   | 6.9  |
| EE00 | Estonia                         | 1347.5                            | 807.1                             | -40.1                            | -29.0                    | -7.5                                   | -3.6                                   | -28.0                            | -9.5   | -2.6   |
|      | Spain                           |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| ES11 | Galicia                         | 2712.2                            | 2057.2                            | -24.1                            | -36.9                    | 6.1                                    | 6.7                                    | -38.4                            | 4.3  | 10.0   |
| ES12 | Principado de Asturias          | 1059.1                            | 768.2                             | -27.5                            | -43.4                    | 8.5                                    | 7.5                                    | -44.7                            | 6.7  | 10.5   |
| ES13 | Cantabria                       | 551.1                             | 508.3                             | -7.8                             | -29.7                    | 13.1                                   | 8.9                                    | -30.9                            | 10.7   | 12.5   |
| ES21 | Pais Vasco                      | 2103.4                            | 1424.9                            | -32.3                            | -28.2                    | -3.7                                   | -0.4                                   | -32.6                            | -4.0   | 4.4  |
|      | Comunidad Foral de Navarra      | 580.6                             | 597.6                             | 2.9                              | -18.9                    | 9.2                                    | 12.6                                   | -22.6                            | 8.6  | 16.9   |
| ES22 | La Rioja                        | 294.3                             | 311.5                             | 5.8                              | -21.3                    | 11.8                                   | 15.4                                   | -25.5                            | 12.5   | 18.8   |
| ES24 | Aragón                          | 1243.5                            | 1235.0                            | -0.7                             | -26.9                    | 8.9                                    | 17.3                                   | -31.1                            | 10.2   | 20.2   |
| ES30 | Comunidad de Madrid             | 5821.1                            | 6620.6                            | 13.7                             | -6.1                     | -8.1                                   | 27.9                                   | -16.9                            | 2.3  | 28.3   |
| ES41 | Castilla y León                 | 2469.3                            | 2090.7                            | -15.3                            | -34.0                    | 8.0                                    | 10.7                                   | -36.7                            | 7.1  | 14.3   |
| ES42 | Castilla-la Mancha              | 1856.8                            | 2581.1                            | 39.0                             | -17.7                    | 39.4                                   | 17.3                                   | -21.6                            | 32.8   | 27.8   |
| ES43 | Extremadura                     | 1068.8                            | 964.0                             | -9.8                             | -22.5                    | 6.2                                    | 6.5                                    | -25.2                            | 3.4  | 12.0   |
| ES51 | Cataluña                        | 6784.1                            | 6820.5                            | 0.5                              | -13.0                    | -1.3                                   | 14.8                                   | -20.7                            | 2.3  | 18.9   |
|      | Comunidad Valenciana            | 4518.1                            | 6003.9                            | 32.9                             | -13.5                    | 19.8                                   | 26.6                                   | -21.7                            | 23.1   | 31.5   |
| ES52 | Illes Balears                   | 958.0                             | 1299.8                            | 35.7                             | -13.5                    | 20.5                                   | 28.7                                   | -18.4                            | 22.7   | 31.4   |
| ES61 | Andalucía                       | 7670.4                            | 8707.4                            | 13.5                             | -10.9                    | 9.8                                    | 14.6                                   | -14.4                            | 8.7  | 19.2   |
| ES62 | Región de Murcia                | 1300.1                            | 1908.1                            | 46.8                             | 0.2                      | 16.4                                   | 30.1                                   | -7.1                             | 19.0   | 34.9   |
|      | Ciudad Autónoma de Ceuta (ES)   | 71.4                              | 72.8                              | 1.9                              | 10.3                     | -12.3                                  | 4.0                                    | 8.4                              | -18.4  | 11.9   |
|      | Ciudad Autónoma de Melilla (ES) | 67.1                              | 43.4                              | -35.4                            | 3.8                      | 6.7                                    | -45.8                                  | 12.5                             | -42.2  | -5.7   |
| ES70 | Canarias (ES)                   | 1908.7                            | 2238.1                            | 17.3                             | -18.1                    | 9.5                                    | 25.9                                   | -21.8                            | 11.7   | 27.3   |
|      | Finland                         |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| FI13 | Itä-Suomi                       | 667.1                             | 497.8                             | -25.4                            | -25.3                    | -4.2                                   | 4.2                                    | -20.2                            | -11.0  | 5.9  |
| FI18 | Etelä-Suomi                     | 2580.8                            | 2689.5                            | 4.2                              | -8.6                     | 5.5                                    | 7.3                                    | -15.0                            | 9.9  | 9.3  |
| FI19 | Länsi-Suomi                     | 1330.4                            | 1282.2                            | -3.6                             | -13.6                    | 5.1                                    | 4.9                                    | -12.2                            | 1.3  | 7.3  |
| FI1A | Pohjois-Suomi                   | 631.9                             | 590.0                             | -6.6                             | -1.3                     | -10.0                                  | 4.7                                    | 7.1                              | -20.6  | 6.9  |
| FI20 | Åland                           | 26.5                              | 28.8                              | 8.4                              | -14.0                    | -2.1                                   | 24.5                                   | -15.9                            | 2.8  | 21.6   |

Table 2. continued

|                                       | Popula-<br>tion<br>2005<br>(1000) | Popula-<br>tion<br>2050<br>(1000) | Popula-<br>tion<br>change<br>(%) | Natural<br>change<br>(%) | Intra-<br>Europe<br>migra-<br>tion (%) | Extra-<br>Europe<br>migra-<br>tion (%) | "No<br>migra-<br>tion"<br>effect | "Intra-<br>Europe<br>migra-<br>tion"<br>effect | "Extra-<br>Europe<br>migra-<br>tion"<br>effect |
|---------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|--------------------------|--|--|----------------------------------|--|--|
| France                                |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| FR10 Île de France                    | 11442.1                           | 11130.3                           | -2.7                             | 17.7                     | -26.7                                  | 6.3                                    | 10.7                             | -21.2  | 7.8  |
| FR21 Champagne-Ardenne                | 1339.4                            | 1133.9                            | -15.3                            | -9.9                     | -12.0                                  | 6.5                                    | -4.5                             | -18.4  | 7.6  |
| FR22 Picardie                         | 1889.0                            | 1825.2                            | -3.4                             | -2.1                     | -8.0                                   | 6.7                                    | 2.8                              | -14.4  | 8.3  |
| FR23 Haute-Normandie                  | 1806.7                            | 1758.1                            | -2.7                             | -1.4                     | -7.9                                   | 6.7                                    | 1.4                              | -12.3  | 8.3  |
| FR24 Centre                           | 2507.2                            | 2559.3                            | 2.1                              | -7.7                     | 2.7                                    | 7.0                                    | -5.3                             | -1.7   | 9.1  |
| FR25 Basse-Normandie                  | 1452.4                            | 1442.8                            | -0.7                             | -8.3                     | 0.7                                    | 6.9                                    | -4.5                             | -5.0   | 8.8  |
| FR26 Bourgogne                        | 1626.2                            | 1546.5                            | -4.9                             | -14.9                    | 3.1                                    | 6.9                                    | -12.4                            | -1.2   | 8.7  |
| FR30 Nord - Pas-de-Calais             | 4015.6                            | 3738.7                            | -6.9                             | 1.9                      | -15.1                                  | 6.3                                    | 6.6                              | -21.1  | 7.6  |
| FR41 Lorraine                         | 2332.5                            | 2078.1                            | -10.9                            | -9.9                     | -7.6                                   | 6.5                                    | -7.9                             | -10.9  | 8.0  |
| FR42 Alsace                           | 1803.4                            | 1757.1                            | -2.6                             | -6.1                     | -3.2                                   | 6.8                                    | -5.4                             | -5.7   | 8.5  |
| FR43 Franche-Comté                    | 1145.7                            | 1140.7                            | -0.4                             | -3.7                     | -3.6                                   | 6.9                                    | -0.5                             | -8.8   | 8.9  |
| FR51 Pays de la Loire                 | 3415.4                            | 4156.4                            | 21.7                             | 2.6                      | 11.7                                   | 7.4                                    | 3.5                              | 7.7  | 10.5   |
| FR52 Bretagne                         | 3066.6                            | 3654.3                            | 19.2                             | -7.1                     | 18.9                                   | 7.3                                    | -5.8                             | 14.6   | 10.4   |
| FR53 Poitou-Charentes                 | 1711.3                            | 1890.5                            | 10.5                             | -13.3                    | 16.5                                   | 7.3                                    | -13.7                            | 14.2   | 10.0   |
| FR61 Aquitaine                        | 3088.2                            | 3609.1                            | 16.9                             | -13.3                    | 22.8                                   | 7.4                                    | -15.6                            | 22.0   | 10.4   |
| FR62 Midi-Pyrénées                    | 2743.1                            | 3361.7                            | 22.6                             | -10.4                    | 25.5                                   | 7.5                                    | -13.9                            | 25.6   | 10.8   |
| FR63 Limousin                         | 727.5                             | 732.4                             | 0.7                              | -22.8                    | 16.4                                   | 7.1                                    | -23.8                            | 15.1   | 9.4  |
| FR71 Rhône-Alpes                      | 5963.7                            | 6897.3                            | 15.7                             | 4.0                      | 4.5                                    | 7.1                                    | 2.5                              | 3.3  | 9.8  |
| FR72 Auvergne                         | 1331.8                            | 1348.1                            | 1.2                              | -18.3                    | 12.5                                   | 7.1                                    | -18.0                            | 9.9  | 9.3  |
| FR81 Languedoc-Roussillon             | 2497.7                            | 3205.2                            | 28.3                             | -6.9                     | 27.7                                   | 7.6                                    | -10.8                            | 28.0   | 11.1   |
| FR82 d'Azur                           | 4768.6                            | 5389.5                            | 13.0                             | -4.5                     | 10.3                                   | 7.2                                    | -8.1                             | 11.2   | 9.9  |
| FR83 Corse                            | 289.1                             | 321.7                             | 11.3                             | -20.2                    | 24.1                                   | 7.3                                    | -23.3                            | 24.4   | 10.2   |
| FR91 Guadeloupe (FR)                  | 399.2                             | 607.9                             | 52.3                             | 45.1                     | -0.3                                   | 7.4                                    | 44.0                             | -2.4   | 10.8   |
| FR92 Martinique (FR)                  | 396.0                             | 452.3                             | 14.2                             | 7.0                      | 0.2                                    | 7.1                                    | 6.1                              | -1.0   | 9.2  |
| FR93 Guyane (FR)                      | 199.2                             | 535.9                             | 169.0                            | 162.8                    | -2.0                                   | 8.2                                    | 165.1                            | -8.2   | 12.1   |
| FR94 Reunion (FR)                     | 772.9                             | 1217.9                            | 57.6                             | 51.2                     | -0.8                                   | 7.2                                    | 51.3                             | -3.4   | 9.6  |
| Greece                                |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| GR11 Anatoliki Makedonia, Thraki      | 607.8                             | 667.8                             | 9.9                              | -31.3                    | 31.0                                   | 10.2                                   | -27.2                            | 24.0   | 13.0   |
| GR12 Kentriki Makedonia               | 1911.5                            | 1591.9                            | -16.7                            | -31.1                    | 5.3                                    | 9.2                                    | -27.8                            | 0.9  | 10.2   |
| GR13 Dytiki Makedonia                 | 294.5                             | 243.6                             | -17.3                            | -29.1                    | 2.9                                    | 8.9                                    | -28.8                            | 1.4  | 10.1   |
| GR14 Thessalia                        | 737.6                             | 567.8                             | -23.0                            | -30.5                    | -1.4                                   | 8.8                                    | -27.6                            | -5.0   | 9.6  |
| GR21 Ipeiros                          | 341.9                             | 278.2                             | -18.6                            | -26.9                    | -0.5                                   | 8.8                                    | -33.2                            | 4.6  | 10.0   |
| GR22 Ionia Nisia                      | 220.4                             | 150.1                             | -31.9                            | -26.4                    | -13.7                                  | 8.2                                    | -30.3                            | -10.1  | 8.5  |
| GR23 Dytiki Ellada                    | 732.3                             | 543.1                             | -25.8                            | -23.3                    | -10.9                                  | 8.4                                    | -27.8                            | -7.1   | 9.0  |
| GR24 Sterea Ellada                    | 558.5                             | 390.0                             | -30.2                            | -18.1                    | -20.0                                  | 8.0                                    | -32.2                            | -6.6   | 8.6  |
| GR25 Peloponnisos                     | 598.2                             | 433.2                             | -27.6                            | -20.4                    | -15.4                                  | 8.2                                    | -32.3                            | -4.2   | 8.9  |
| GR30 Attiki                           | 3973.3                            | 3348.0                            | -15.7                            | -28.8                    | 3.9                                    | 9.2                                    | -29.6                            | 3.6  | 10.2   |
| GR41 Voreio Aigaio                    | 202.4                             | 270.4                             | 33.6                             | -33.6                    | 55.8                                   | 11.4                                   | -30.4                            | 48.3   | 15.7   |
| GR42 Notio Aigaio                     | 303.1                             | 314.3                             | 3.7                              | -16.5                    | 10.4                                   | 9.8                                    | -16.4                            | 8.0  | 12.1   |
| GR43 Kriti                            | 601.3                             | 551.8                             | -8.2                             | -17.9                    | 0.3                                    | 9.4                                    | -15.0                            | -4.1   | 10.9   |
| Hungary                               |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| HU10 Közép-Magyarország               | 2841.0                            | 2013.6                            | -29.1                            | -28.9                    | 5.6                                    | -5.8                                   | -36.7                            | 8.3  | -0.7   |
| HU21 Közép-Dunántúl                   | 1110.9                            | 706.5                             | -36.4                            | -34.8                    | 1.6                                    | -3.3                                   | -35.5                            | 0.3  | -1.2   |
| HU22 Nyugat-Dunántúl                  | 1000.3                            | 660.8                             | -33.9                            | -38.8                    | 3.9                                    | 1.0                                    | -38.0                            | 2.7  | 1.3  |
| HU23 Dél-Dunántúl                     | 977.5                             | 561.8                             | -42.5                            | -36.9                    | -5.4                                   | -0.3                                   | -37.2                            | -5.8   | 0.4  |
| HU31 Észak-Magyarország               | 1271.1                            | 685.3                             | -46.1                            | -34.3                    | -11.6                                  | -0.2                                   | -32.1                            | -14.2  | 0.2  |
| HU32 Észak-Alföld                     | 1541.8                            | 888.8                             | -42.4                            | -29.3                    | -12.3                                  | -0.8                                   | -27.7                            | -14.7  | 0.1  |
| HU33 Dél-Alföld                       | 1354.9                            | 805.6                             | -40.5                            | -37.6                    | -2.4                                   | -0.5                                   | -36.9                            | -4.1   | 0.5  |
| Ireland                               |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| IE01 Border, Midlands and Western     | 1098.1                            | 1526.0                            | 39.0                             | 12.7                     | 27.7                                   | -1.5                                   | 11.6                             | 25.4   | 2.0  |
| IE02 Southern and Eastern             | 3011.0                            | 3732.1                            | 23.9                             | 15.5                     | 10.2                                   | -1.7                                   | 11.9                             | 10.6   | 1.5  |
| IS00 Iceland                          | 293.6                             | 327.6                             | 11.6                             | 10.1                     | -0.7                                   | 2.2                                    | 18.1                             | -10.6  | 4.0  |
| Italy                                 |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| ITC1 Piemonte                         | 4330.2                            | 4644.1                            | 7.3                              | -30.2                    | 5.0                                    | 32.4                                   | -38.3                            | 9.2  | 36.4   |
| ITC2 Valle d'Aosta/Vallée d'Aoste     | 122.9                             | 132.7                             | 8.0                              | -29.0                    | 15.2                                   | 21.7                                   | -34.5                            | 13.3   | 29.2   |
| ITC3 Liguria                          | 1592.3                            | 1621.4                            | 1.8                              | -37.4                    | 11.1                                   | 28.1                                   | -46.0                            | 14.4   | 33.4   |
| ITC4 Lombardia                        | 9393.1                            | 11884.5                           | 26.5                             | -20.7                    | 8.3                                    | 38.9                                   | -31.0                            | 13.7   | 43.8   |
| ITD1 Provincia Autonoma Bolzano-Bozen | 477.1                             | 586.6                             | 23.0                             | -5.8                     | 4.9                                    | 23.8                                   | -15.1                            | 7.3  | 30.8   |
| ITD2 Provincia Autonoma Trento        | 497.5                             | 661.6                             | 33.0                             | -11.5                    | 12.1                                   | 32.3                                   | -23.0                            | 14.7   | 41.3   |
| ITD3 Veneto                           | 4700.0                            | 6022.6                            | 28.1                             | -19.7                    | 9.1                                    | 38.7                                   | -29.4                            | 12.9   | 44.6   |
| ITD4 Friuli-Venezia Giulia            | 1204.7                            | 1262.4                            | 4.8                              | -33.9                    | 11.1                                   | 27.6                                   | -40.4                            | 12.6   | 32.6   |
| ITD5 Emilia-Romagna                   | 4151.4                            | 5469.1                            | 31.7                             | -26.4                    | 20.9                                   | 37.2                                   | -35.9                            | 23.7   | 43.9   |
| ITE1 Toscana                          | 3598.3                            | 4212.9                            | 17.1                             | -29.1                    | 13.3                                   | 32.8                                   | -37.3                            | 15.9   | 38.5   |
| ITE2 Umbria                           | 858.9                             | 1156.6                            | 34.7                             | -23.8                    | 17.4                                   | 41.0                                   | -34.9                            | 20.9   | 48.6   |
| ITE3 Marche                           | 1518.8                            | 1875.6                            | 23.5                             | -24.5                    | 14.7                                   | 33.3                                   | -33.1                            | 16.8   | 39.8   |

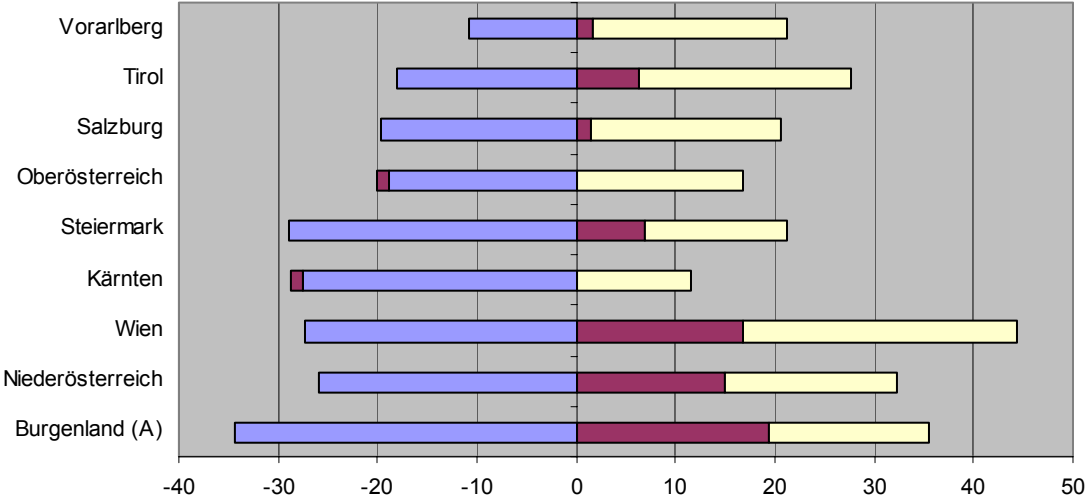
Table 2. continued

|      |                                 | Popula-<br>tion<br>2005<br>(1000) | Popula-<br>tion<br>2050<br>(1000) | Popula-<br>tion<br>change<br>(%) | Natural<br>change<br>(%) | Intra-<br>Europe<br>migra-<br>tion (%) | Extra-<br>Europe<br>migra-<br>tion (%) | "No<br>migra-<br>tion"<br>effect | "Intra-<br>Europe<br>migra-<br>tion"<br>effect | "Extra-<br>Europe<br>migra-<br>tion"<br>effect |
|------|---------------------------------|-----------------------------------|-----------------------------------|----------------------------------|--------------------------|--|--|----------------------------------|--|--|
| ITE4 | Lazio                           | 5270.0                            | 6088.0                            | 15.5                             | -19.9                    | 3.3                                    | 32.2                                   | -30.4                            | 9.4  | 36.6   |
| ITF1 | Abruzzo                         | 1299.3                            | 1387.7                            | 6.8                              | -26.4                    | 10.2                                   | 23.0                                   | -32.5                            | 10.7   | 28.6   |
| ITF2 | Molise                          | 322.0                             | 254.9                             | -20.8                            | -30.8                    | -2.6                                   | 12.6                                   | -34.5                            | -2.2   | 15.9   |
| ITF3 | Campania                        | 5789.0                            | 5208.9                            | -10.0                            | -12.1                    | -11.8                                  | 13.8                                   | -15.4                            | -12.3  | 17.6   |
| ITF4 | Puglia                          | 4068.2                            | 3218.9                            | -20.9                            | -21.0                    | -7.3                                   | 7.5                                    | -22.2                            | -9.5   | 10.8   |
| ITF5 | Basilicata                      | 596.5                             | 427.6                             | -28.3                            | -25.9                    | -11.3                                  | 8.8                                    | -29.0                            | -10.8  | 11.5   |
| ITF6 | Calabria                        | 2009.3                            | 1558.7                            | -22.4                            | -20.8                    | -15.4                                  | 13.8                                   | -24.5                            | -14.8  | 16.8   |
| ITG1 | Sicilia                         | 5013.1                            | 4118.1                            | -17.9                            | -19.0                    | -7.4                                   | 8.5                                    | -20.3                            | -9.8   | 12.2   |
| ITG2 | Sardegna                        | 1650.1                            | 1298.0                            | -21.3                            | -33.3                    | 5.3                                    | 6.7                                    | -34.4                            | 1.9  | 11.2   |
| LI00 | Liechtenstein                   | 34.6                              | 29.5                              | -14.8                            | -17.1                    | 6.1                                    | -3.8                                   | -15.4                            | 1.0  | -0.3   |
| LT00 | Lithuania                       | 3425.3                            | 1915.9                            | -44.1                            | -34.8                    | -7.4                                   | -1.9                                   | -33.2                            | -9.6   | -1.2   |
|      | Luxembourg (Grand-Duché)        | 461.2                             | 600.9                             | 30.3                             | -3.7                     | 37.1                                   | -3.1                                   | -13.0                            | 37.2   | 6.1  |
| LV00 | Latvia                          | 2306.4                            | 1171.7                            | -49.2                            | -33.8                    | -4.9                                   | -10.5                                  | -37.4                            | -4.5   | -7.2   |
| MT00 | Malta                           | 402.7                             | 288.2                             | -28.4                            | -20.9                    | 2.3                                    | -9.8                                   | -19.8                            | -0.8   | -7.8   |
|      | Netherlands                     |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| NL11 | Groningen                       | 575.1                             | 580.5                             | 0.9                              | -14.5                    | 5.8                                    | 9.7                                    | -16.9                            | 6.3  | 11.6   |
| NL12 | Friesland (NL)                  | 643.0                             | 635.2                             | -1.2                             | -8.4                     | -0.3                                   | 7.5                                    | -7.1                             | -4.9   | 10.8   |
| NL13 | Drenthe                         | 483.4                             | 477.8                             | -1.2                             | -7.5                     | 2.0                                    | 4.4                                    | -12.9                            | 2.7  | 9.0  |
| NL21 | Overijssel                      | 1109.4                            | 1095.5                            | -1.3                             | -4.3                     | -0.8                                   | 3.9                                    | -3.3                             | -6.0   | 8.1  |
| NL22 | Gelderland                      | 1972.0                            | 1844.5                            | -6.5                             | -9.7                     | -1.0                                   | 4.2                                    | -10.6                            | -3.8   | 8.0  |
| NL23 | Flevoland                       | 365.9                             | 453.1                             | 23.8                             | 21.8                     | -5.5                                   | 7.5                                    | 12.5                             | -2.0   | 13.3   |
| NL31 | Utrecht                         | 1171.3                            | 1310.3                            | 11.9                             | 2.3                      | 5.9                                    | 3.6                                    | -4.1                             | 6.5  | 9.6  |
| NL32 | Noord-Holland                   | 2599.1                            | 2789.3                            | 7.3                              | -4.4                     | 1.3                                    | 10.4                                   | -12.8                            | 6.3  | 13.8   |
| NL33 | Zuid-Holland                    | 3458.4                            | 3356.4                            | -2.9                             | -5.0                     | -7.4                                   | 9.4                                    | -10.4                            | -4.9   | 12.3   |
| NL34 | Zeeland                         | 380.0                             | 355.5                             | -6.4                             | -12.8                    | 0.7                                    | 5.6                                    | -13.2                            | -2.6   | 9.3  |
| NL41 | Noord-Brabant                   | 2411.4                            | 2108.7                            | -12.6                            | -13.9                    | -2.7                                   | 4.0                                    | -14.0                            | -6.1   | 7.5  |
| NL42 | Limburg (NL)                    | 1136.7                            | 823.3                             | -27.6                            | -27.1                    | -3.4                                   | 2.9                                    | -25.6                            | -8.1   | 6.1  |
|      | Norway                          |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| NO01 | Oslo og Akershus                | 1024.1                            | 1284.2                            | 25.4                             | 14.4                     | -1.0                                   | 12.1                                   | -2.0                             | 11.3   | 16.1   |
| NO02 | Hedmark og Oppland              | 371.6                             | 326.3                             | -12.2                            | -20.4                    | 0.7                                    | 7.6                                    | -18.3                            | -4.4   | 10.5   |
| NO03 | Sør-Østlandet                   | 889.1                             | 921.9                             | 3.7                              | -11.7                    | 8.0                                    | 7.4                                    | -11.8                            | 3.6  | 11.8   |
| NO04 | Agder og Rogaland               | 658.0                             | 761.0                             | 15.7                             | 6.8                      | -0.2                                   | 9.1                                    | 6.0                              | -3.7   | 13.3   |
| NO05 | Vestlandet                      | 800.1                             | 801.4                             | 0.2                              | 0.9                      | -9.4                                   | 8.7                                    | 3.8                              | -15.5  | 11.9   |
| NO06 | Trøndelag                       | 401.0                             | 442.7                             | 10.4                             | -1.1                     | 3.7                                    | 7.8                                    | -1.7                             | -0.1   | 12.2   |
| NO07 | Nord-Norge                      | 462.6                             | 393.0                             | -15.0                            | -9.6                     | -16.8                                  | 11.4                                   | -5.8                             | -21.6  | 12.3   |
|      | Poland                          |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| PL11 | Lódzkie                         | 2587.7                            | 1597.0                            | -38.3                            | -36.8                    | -2.5                                   | 1.1                                    | -35.9                            | -3.6   | 1.2  |
| PL12 | Mazowieckie                     | 5146.0                            | 4729.7                            | -8.1                             | -28.0                    | 15.5                                   | 4.4                                    | -28.7                            | 15.6   | 5.0  |
| PL21 | Malopolskie                     | 3260.2                            | 2911.8                            | -10.7                            | -21.8                    | 5.6                                    | 5.4                                    | -21.6                            | 4.8  | 6.1  |
| PL22 | Slaskie                         | 4700.8                            | 1561.5                            | -66.8                            | -32.6                    | -28.1                                  | -6.0                                   | -34.7                            | -29.9  | -2.2   |
| PL31 | Lubelskie                       | 2185.2                            | 1502.4                            | -31.2                            | -25.7                    | -7.1                                   | 1.6                                    | -23.8                            | -9.3   | 1.9  |
| PL32 | Podkarpackie                    | 2098.0                            | 1589.0                            | -24.3                            | -20.7                    | -6.3                                   | 2.8                                    | -19.0                            | -8.7   | 3.5  |
| PL33 | Swietokrzyskie                  | 1288.7                            | 821.3                             | -36.3                            | -31.2                    | -6.7                                   | 1.6                                    | -29.2                            | -8.9   | 1.8  |
| PL34 | Podlaskie                       | 1202.4                            | 784.4                             | -34.8                            | -27.0                    | -9.8                                   | 2.0                                    | -25.2                            | -12.3  | 2.7  |
| PL41 | Wielkopolskie                   | 3365.3                            | 2659.2                            | -21.0                            | -23.7                    | 1.5                                    | 1.2                                    | -22.9                            | 0.4  | 1.5  |
| PL42 | Zachodniopomorskie              | 1694.9                            | 1117.4                            | -34.1                            | -28.9                    | -6.5                                   | 1.3                                    | -28.5                            | -7.4   | 1.8  |
| PL43 | Lubuskie                        | 1009.2                            | 734.7                             | -27.2                            | -27.7                    | -3.5                                   | 4.0                                    | -26.0                            | -5.5   | 4.3  |
| PL51 | Dolnoslaskie                    | 2893.1                            | 1735.2                            | -40.0                            | -33.8                    | -7.2                                   | 1.0                                    | -33.8                            | -8.0   | 1.8  |
| PL52 | Opolskie                        | 1051.5                            | 290.5                             | -72.4                            | -30.5                    | -38.8                                  | -3.1                                   | -34.3                            | -40.5  | 2.4  |
| PL61 | Kujawsko-Pomorskie              | 2068.3                            | 1369.3                            | -33.8                            | -26.5                    | -7.3                                   | 0.0                                    | -25.6                            | -8.6   | 0.4  |
| PL62 | Warmińsko-Mazurskie             | 1428.7                            | 826.4                             | -42.2                            | -23.2                    | -18.2                                  | -0.7                                   | -20.6                            | -22.0  | 0.4  |
| PL63 | Pomorskie                       | 2194.0                            | 1548.2                            | -29.4                            | -21.2                    | -8.1                                   | -0.1                                   | -20.6                            | -9.9   | 1.1  |
|      | Portugal                        |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| PT11 | Norte                           | 3727.3                            | 2512.1                            | -32.6                            | -23.9                    | -7.1                                   | -1.6                                   | -23.1                            | -9.0   | -0.5   |
| PT15 | Algarve                         | 411.5                             | 645.8                             | 56.9                             | -9.3                     | 21.1                                   | 45.1                                   | -20.8                            | 26.9   | 50.8   |
| PT16 | Centro (PT)                     | 2376.6                            | 1712.8                            | -27.9                            | -30.6                    | 0.5                                    | 2.2                                    | -30.6                            | -2.1   | 4.7  |
| PT17 | Lisboa                          | 2760.7                            | 2878.7                            | 4.3                              | -13.2                    | -3.7                                   | 21.2                                   | -21.4                            | 1.6  | 24.1   |
| PT18 | Alentejo                        | 767.7                             | 535.7                             | -30.2                            | -33.4                    | 1.9                                    | 1.4                                    | -33.7                            | -1.6   | 5.0  |
| PT20 | Região Autónoma dos Açores (PT) | 241.2                             | 203.0                             | -15.8                            | -13.6                    | -3.8                                   | 1.6                                    | -9.2                             | -9.5   | 2.8  |
| PT30 | Região Autónoma da Madeira (PT) | 244.3                             | 229.3                             | -6.1                             | -18.0                    | -1.4                                   | 13.3                                   | -17.5                            | -3.6   | 15.0   |
|      | Romania                         |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| RO11 | Nord-Vest                       | 2742.7                            | 1030.5                            | -62.4                            | -29.7                    | -25.1                                  | -7.7                                   | -30.2                            | -27.3  | -4.9   |
| RO12 | Centru                          | 2533.4                            | 727.8                             | -71.3                            | -28.4                    | -32.0                                  | -10.9                                  | -28.7                            | -36.9  | -5.7   |
| RO21 | Nord-Est                        | 3735.5                            | 1683.5                            | -54.9                            | -21.3                    | -27.4                                  | -6.3                                   | -17.8                            | -33.0  | -4.1   |
| RO22 | Sud-Est                         | 2850.0                            | 1301.9                            | -54.3                            | -31.9                    | -18.3                                  | -4.1                                   | -32.3                            | -19.4  | -2.6   |
| RO31 | Sud - Muntenia                  | 3338.2                            | 1807.4                            | -45.9                            | -36.9                    | -7.4                                   | -1.6                                   | -34.6                            | -10.6  | -0.6   |
| RO32 | Bucuresti - Ilfov               | 2209.8                            | 1743.6                            | -21.1                            | -36.0                    | -7.7                                   | 22.7                                   | -39.7                            | 2.2  | 16.4   |
| RO41 | Sud-Vest Oltenia                | 2313.9                            | 1085.7                            | -53.1                            | -37.1                    | -13.5                                  | -2.5                                   | -36.8                            | -14.6  | -1.7   |
| RO42 | Vest                            | 1935.1                            | 685.8                             | -64.6                            | -34.4                    | -22.7                                  | -7.4                                   | -36.9                            | -23.7  | -3.9   |

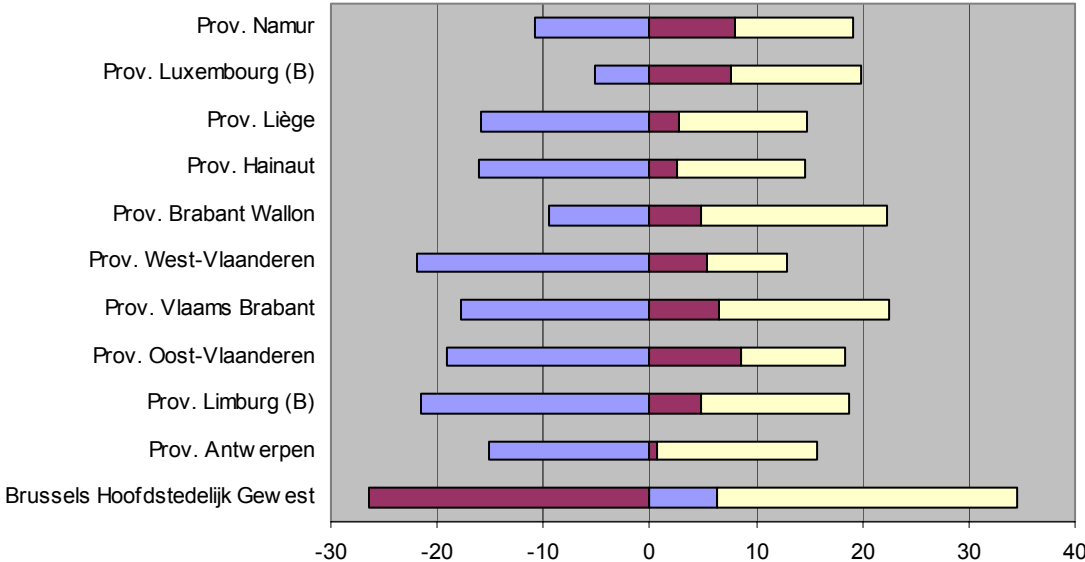
Table 2. continued

|      |                         | Popula-<br>tion<br>2005<br>(1000) | Popula-<br>tion<br>2050<br>(1000) | Popula-<br>tion<br>change<br>(%) | Natural<br>change<br>(%) | Intra-<br>Europe<br>migra-<br>tion (%) | Extra-<br>Europe<br>migra-<br>tion (%) | "No<br>migra-<br>tion"<br>effect | "Intra-<br>Europe<br>migra-<br>tion"<br>effect | "Extra-<br>Europe<br>migra-<br>tion"<br>effect |
|------|-------------------------|-----------------------------------|-----------------------------------|----------------------------------|--------------------------|--|--|----------------------------------|--|--|
|      | Sweden                  |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| SE11 | Stockholm               | 1872.9                            | 2351.6                            | 25.6                             | 12.9                     | -2.7                                   | 15.4                                   | -3.9                             | 9.0  | 20.4   |
| SE12 | Östra Mellansverige     | 1514.5                            | 1541.9                            | 1.8                              | -10.1                    | 1.2                                    | 10.8                                   | -12.5                            | -1.1   | 15.4   |
| SE21 | Småland med öarna       | 799.7                             | 787.5                             | -1.5                             | -12.7                    | -0.5                                   | 11.6                                   | -12.1                            | -5.1   | 15.7   |
| SE22 | Sydsverige              | 1311.3                            | 1559.7                            | 19.0                             | -5.1                     | 6.0                                    | 18.1                                   | -12.8                            | 10.2   | 21.5   |
| SE23 | Västsverige             | 1805.7                            | 1979.0                            | 9.6                              | -6.6                     | 4.4                                    | 11.7                                   | -10.6                            | 3.7  | 16.5   |
| SE31 | Norra Mellansverige     | 826.2                             | 737.1                             | -10.8                            | -19.6                    | -2.7                                   | 11.5                                   | -18.3                            | -6.9   | 14.4   |
| SE32 | Mellersta Norrland      | 371.6                             | 336.6                             | -9.4                             | -19.1                    | -0.8                                   | 10.5                                   | -17.4                            | -6.2   | 14.2   |
| SE33 | Övre Norrland           | 509.5                             | 445.7                             | -12.5                            | -18.7                    | -5.8                                   | 12.0                                   | -16.4                            | -10.5  | 14.3   |
|      | Slovenia                |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| SI01 | Vzhodna Slovenija       | 1077.9                            | 728.2                             | -32.4                            | -35.7                    | -0.3                                   | 3.5                                    | -34.6                            | -1.8   | 3.9  |
| SI02 | Zahodna Slovenija       | 919.7                             | 720.6                             | -21.6                            | -27.2                    | 0.4                                    | 5.2                                    | -28.4                            | 1.0  | 5.7  |
|      | Slovakia                |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| SK01 | Bratislavský kraj       | 601.1                             | 328.2                             | -45.4                            | -26.0                    | -28.5                                  | 9.1                                    | -34.1                            | -17.6  | 6.2  |
| SK02 | Západné Slovensko       | 1863.9                            | 1217.7                            | -34.7                            | -35.4                    | -7.6                                   | 8.3                                    | -35.3                            | -5.8   | 6.4  |
| SK03 | Stredné Slovensko       | 1352.5                            | 813.8                             | -39.8                            | -25.9                    | -16.9                                  | 3.0                                    | -26.9                            | -15.7  | 2.7  |
| SK04 | Východné Slovensko      | 1567.3                            | 1220.7                            | -22.1                            | -13.9                    | -12.3                                  | 4.1                                    | -13.1                            | -12.6  | 3.6  |
|      | United Kingdom          |                                   |                                   |                                  |                          |  |  |                                  |  |  |
|      | Tees Valley and         |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKC1 | Durham                  | 1153.3                            | 1212.7                            | 5.1                              | -8.6                     | 9.2                                    | 4.6                                    | -11.0                            | 2.3  | 13.8   |
|      | Northumberland, Tyne    |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKC2 | and Wear                | 1394.7                            | 1400.6                            | 0.4                              | -13.7                    | 6.9                                    | 7.3                                    | -17.9                            | 3.3  | 15.0   |
| UKD1 | Cumbria                 | 495.2                             | 509.6                             | 2.9                              | -14.9                    | 14.2                                   | 3.6                                    | -20.2                            | 10.1   | 13.1   |
| UKD2 | Cheshire                | 995.5                             | 1048.3                            | 5.3                              | -5.7                     | 8.2                                    | 2.8                                    | -12.4                            | 4.6  | 13.1   |
| UKD3 | Greater Manchester      | 2538.7                            | 2766.6                            | 9.0                              | 3.8                      | -5.4                                   | 10.6                                   | -3.8                             | -5.6   | 18.4   |
| UKD4 | Lancashire              | 1443.5                            | 1567.0                            | 8.6                              | -2.1                     | 6.0                                    | 4.7                                    | -7.5                             | 1.6  | 14.5   |
| UKD5 | Merseyside              | 1359.0                            | 1260.4                            | -7.3                             | -10.1                    | -2.3                                   | 5.1                                    | -13.3                            | -6.3   | 12.3   |
|      | East Yorkshire and      |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKE1 | Northern Lincolnshire   | 897.8                             | 1035.2                            | 15.3                             | -3.1                     | 5.7                                    | 12.7                                   | -12.0                            | 6.3  | 21.1   |
| UKE2 | North Yorkshire         | 773.3                             | 912.4                             | 18.0                             | -7.8                     | 9.0                                    | 16.8                                   | -18.4                            | 13.5   | 23.0   |
| UKE3 | South Yorkshire         | 1283.8                            | 1422.5                            | 10.8                             | -4.8                     | 3.5                                    | 12.1                                   | -9.9                             | 0.7  | 20.0   |
| UKE4 | West Yorkshire          | 2130.4                            | 2665.4                            | 25.1                             | 8.3                      | -3.3                                   | 20.2                                   | -1.5                             | -0.2   | 26.8   |
|      | Derbyshire and          |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKF1 | Nottinghamshire         | 2028.4                            | 2316.1                            | 14.2                             | -8.2                     | 10.1                                   | 12.3                                   | -13.9                            | 7.7  | 20.4   |
|      | Leicestershire, Rutland |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKF2 | and Northants           | 1603.8                            | 2015.5                            | 25.7                             | 2.7                      | 6.0                                    | 17.0                                   | -4.8                             | 5.2  | 25.3   |
| UKF3 | Lincolnshire            | 678.4                             | 834.2                             | 23.0                             | -6.4                     | 24.8                                   | 4.5                                    | -19.3                            | 23.4   | 18.9   |
|      | Herefordshire,          |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKG1 | Worcestershire and      | 1243.7                            | 1339.8                            | 7.7                              | -7.9                     | 12.8                                   | 2.8                                    | -15.1                            | 7.7  | 15.2   |
|      | Warks                   |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKG2 | Shropshire and          | 1507.2                            | 1584.7                            | 5.1                              | -7.9                     | 10.2                                   | 2.8                                    | -11.8                            | 3.6  | 13.3   |
| UKG3 | Staffordshire           | 1507.2                            | 1584.7                            | 5.1                              | -7.9                     | 10.2                                   | 2.8                                    | -11.8                            | 3.6  | 13.3   |
| UKG3 | West Midlands           | 2588.6                            | 2824.5                            | 9.1                              | 11.0                     | -17.2                                  | 15.3                                   | 4.4                              | -16.7  | 21.4   |
| UKH1 | East Anglia             | 2255.1                            | 2880.2                            | 27.7                             | -3.9                     | 17.5                                   | 14.2                                   | -13.3                            | 16.5   | 24.6   |
|      | Bedfordshire,           |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKH2 | Hertfordshire           | 1631.8                            | 1950.3                            | 19.5                             | 8.6                      | 1.6                                    | 9.3                                    | -2.6                             | -1.8   | 23.9   |
| UKH3 | Essex                   | 1650.7                            | 2028.0                            | 22.9                             | 1.3                      | 15.1                                   | 6.4                                    | -9.8                             | 9.6  | 23.0   |
| UKI1 | Inner London            | 2925.5                            | 3648.8                            | 24.7                             | 36.9                     | -69.2                                  | 57.0                                   | 6.0                              | -20.4  | 39.1   |
| UKI2 | Outer London            | 4497.4                            | 5365.4                            | 19.3                             | 22.0                     | -29.5                                  | 26.8                                   | 2.2                              | -15.7  | 32.8   |
|      | Berkshire, Bucks and    |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKJ1 | Oxfordshire             | 2134.3                            | 2606.3                            | 22.1                             | 7.0                      | -0.9                                   | 16.0                                   | -3.4                             | 0.2  | 25.3   |
|      | Surrey, East and West   |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKJ2 | Sussex                  | 2589.8                            | 3098.2                            | 19.6                             | -6.1                     | 17.5                                   | 8.2                                    | -15.2                            | 11.8   | 22.9   |
|      | Hampshire and Isle of   |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKJ3 | Wight                   | 1812.2                            | 2198.3                            | 21.3                             | -2.9                     | 13.7                                   | 10.6                                   | -12.4                            | 12.0   | 21.7   |
| UKJ4 | Kent                    | 1618.6                            | 1983.7                            | 22.6                             | -1.0                     | 15.7                                   | 7.8                                    | -8.1                             | 7.5  | 23.2   |
|      | Gloucestershire,        |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKK1 | Wiltshire and           | 2227.8                            | 2781.0                            | 24.8                             | -1.6                     | 13.1                                   | 13.3                                   | -11.0                            | 13.1   | 22.7   |
| UKK2 | Bristol/Bath area       | 1210.9                            | 1402.4                            | 15.8                             | -8.2                     | 23.7                                   | 0.4                                    | -18.7                            | 18.3   | 16.2   |
|      | Dorset and Somerset     |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKK3 | Cornwall and Isles of   | 520.8                             | 643.5                             | 23.6                             | -8.4                     | 32.1                                   | -0.2                                   | -22.0                            | 29.4   | 16.1   |
| UKK4 | Scilly                  | 1106.2                            | 1412.3                            | 27.7                             | -6.1                     | 24.4                                   | 9.4                                    | -18.3                            | 25.1   | 20.8   |
|      | Devon                   |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKL1 | West Wales and The      | 1877.6                            | 2019.6                            | 7.6                              | -9.2                     | 15.5                                   | 1.3                                    | -13.2                            | 9.4  | 11.4   |
| UKL2 | Valleys                 | 1072.5                            | 1209.7                            | 12.8                             | -3.9                     | 9.6                                    | 7.1                                    | -10.4                            | 7.5  | 15.7   |
| UKM2 | East Wales              | 1933.5                            | 2117.4                            | 9.5                              | -10.8                    | 8.8                                    | 11.5                                   | -20.1                            | 10.1   | 19.5   |
|      | Eastern Scotland        |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKM3 | South Western           | 2262.9                            | 2050.3                            | -9.4                             | -16.1                    | -0.9                                   | 7.6                                    | -20.6                            | -2.9   | 14.1   |
|      | Scotland                |                                   |                                   |                                  |                          |  |  |                                  |  |  |
| UKM5 | North Eastern           | 439.3                             | 441.5                             | 0.5                              | -12.7                    | -4.1                                   | 17.4                                   | -22.3                            | 1.4  | 21.4   |
| UKM6 | Scotland                | 459.0                             | 416.2                             | -9.3                             | -17.7                    | 1.0                                    | 7.3                                    | -17.0                            | -6.8   | 14.5   |
| UKN0 | Highlands and Islands   | 1724.4                            | 2093.0                            | 21.4                             | 10.5                     | 0.5                                    | 10.3                                   | 2.9                              | -0.8   | 19.3   |
|      | Northern Ireland        |                                   |                                   |                                  |                          |  |  |                                  |  |  |

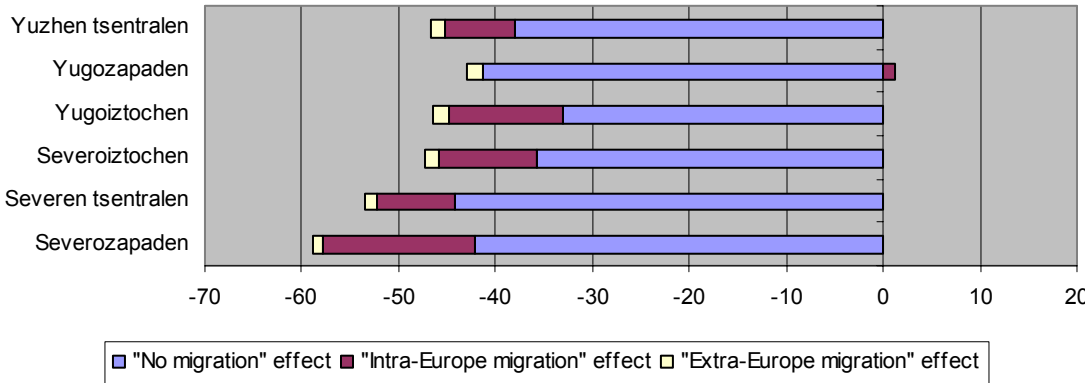
**Figure 9. Austria: Impact of migration on population change, NUTS2**



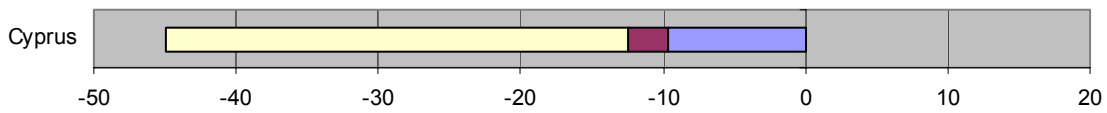
**Figure 10. Belgium: Impact of migration on population change, NUTS2**



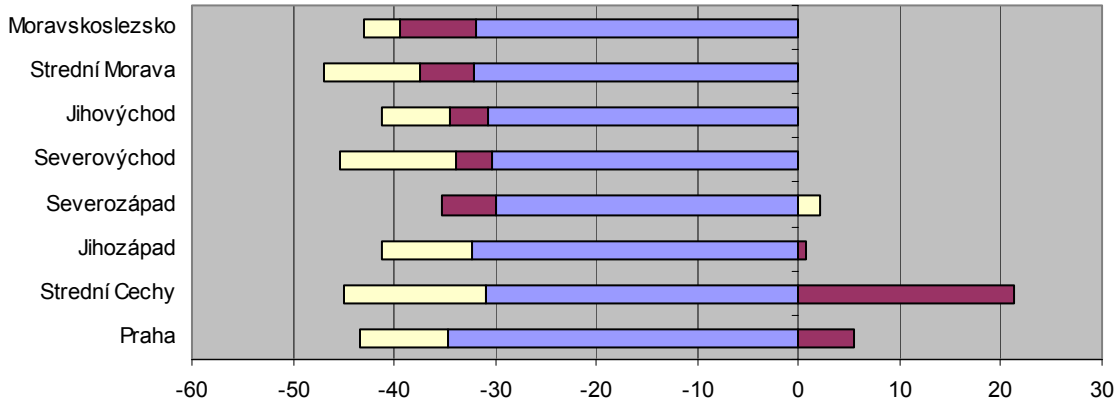
**Figure 11. Bulgaria: Impact of migration on population change, NUTS2**



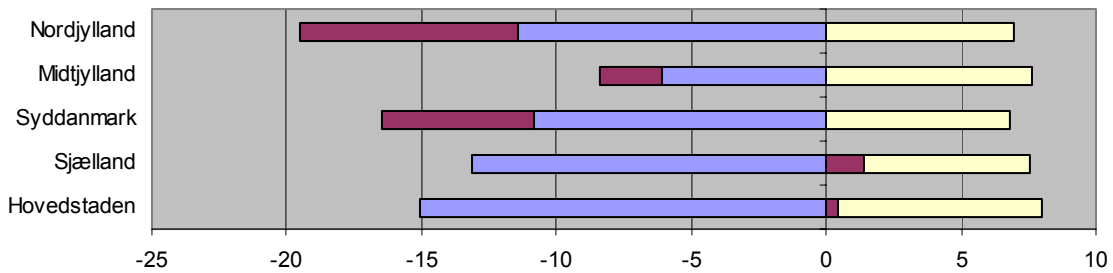
**Figure 12. Cyprus: Impact of migration on population change, NUTS2**



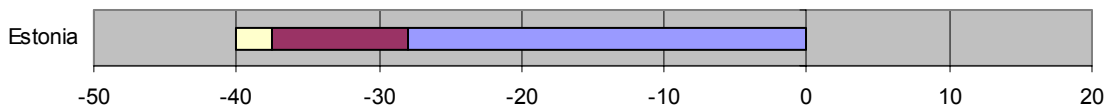
**Figure 13. Czech Republic: Impact of migration on population change, NUTS2**



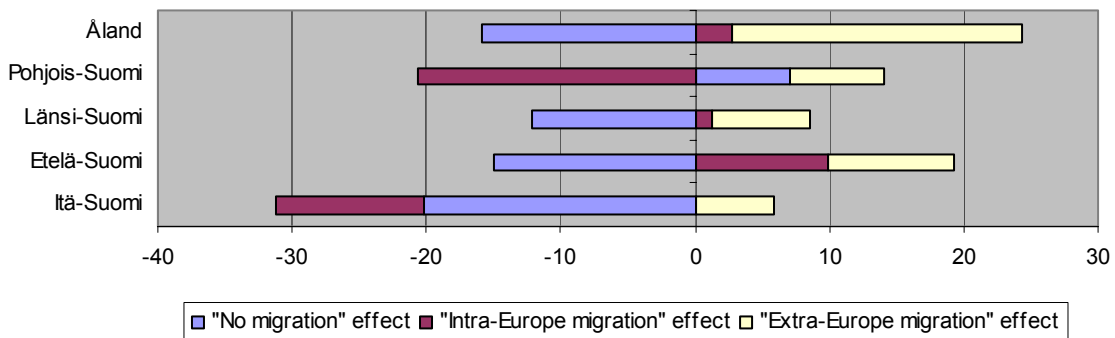
**Figure 14. Denmark: Impact of migration on population change, NUTS2**



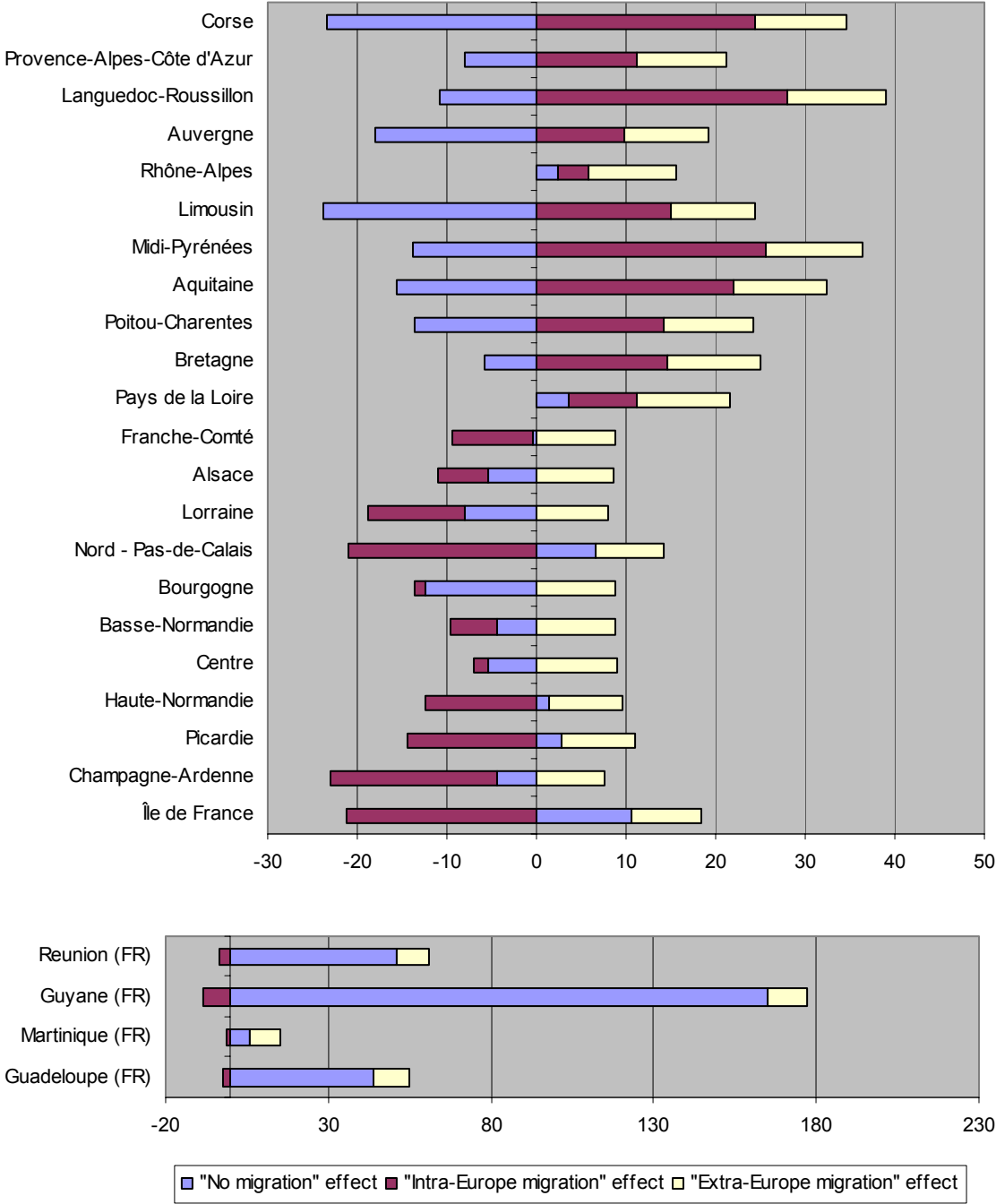
**Figure 15. Estonia: Impact of migration on population change, NUTS2**



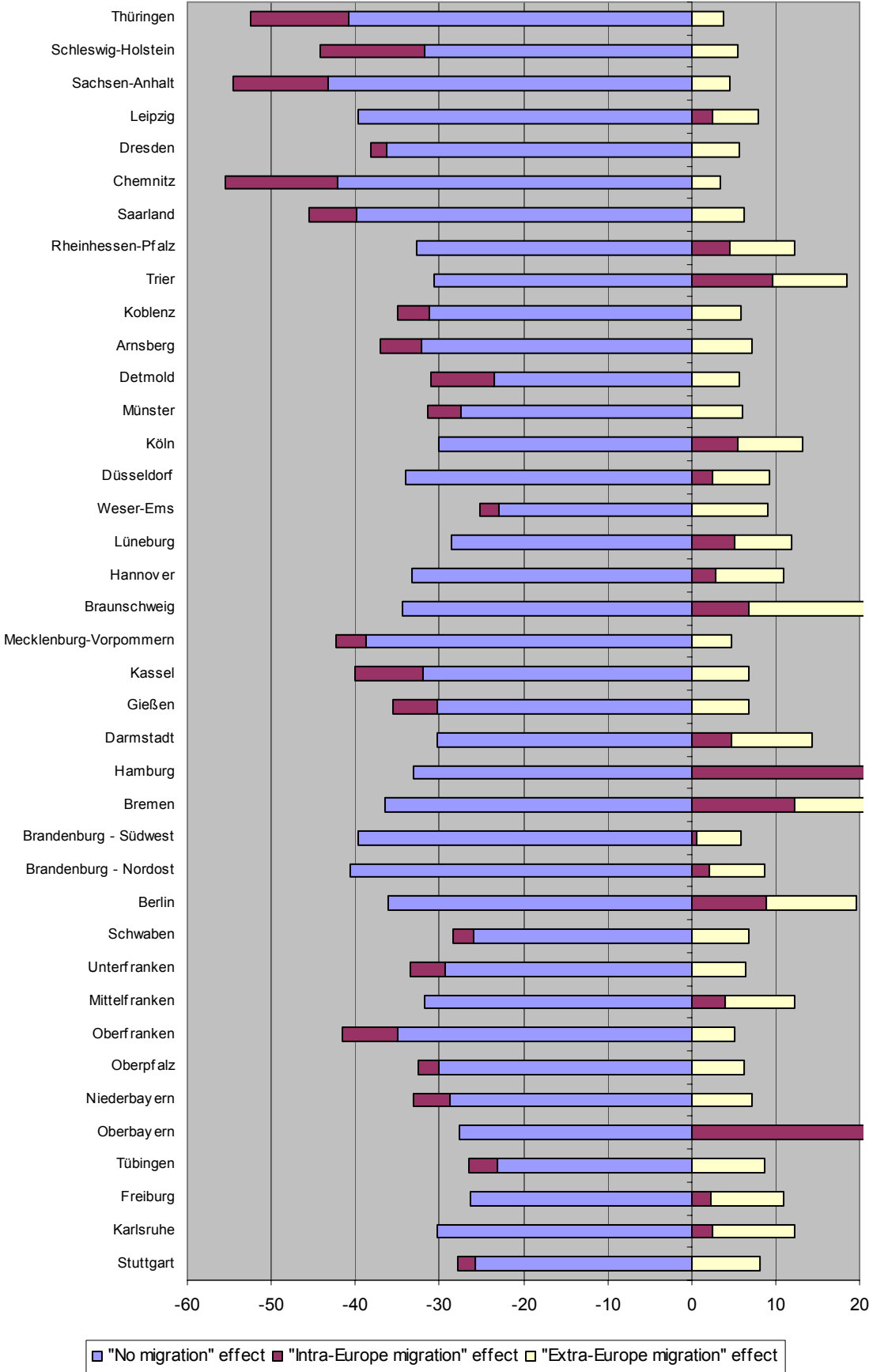
**Figure 16. Finland: Impact of migration on population change, NUTS2**



**Figure 17. France: Impact of migration on population change, NUTS2**

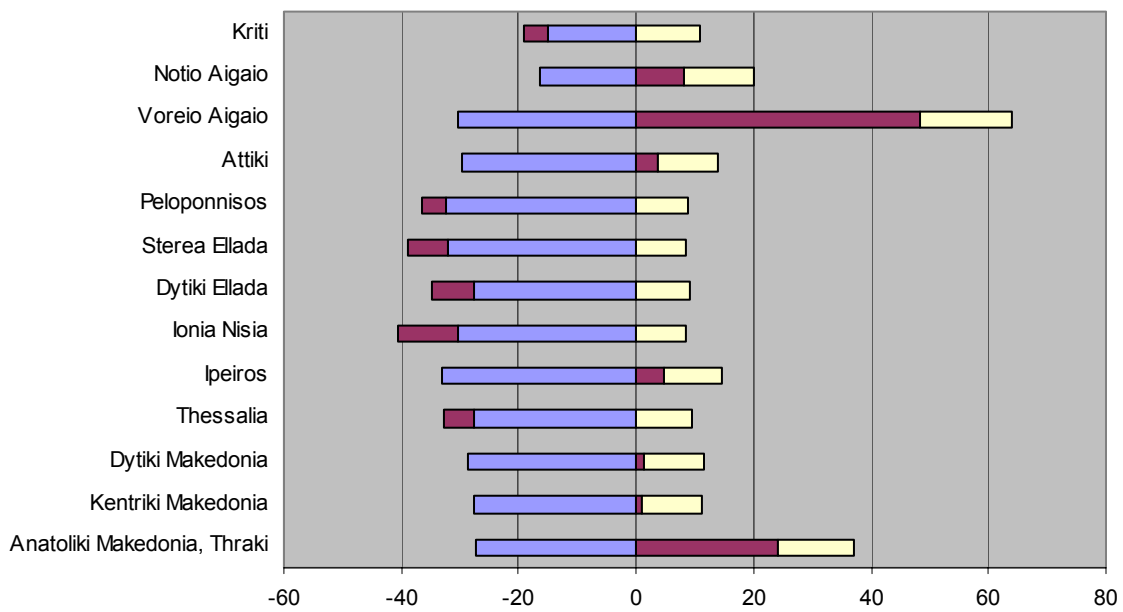


**Figure 18. Germany: Impact of migration on population change, NUTS2**

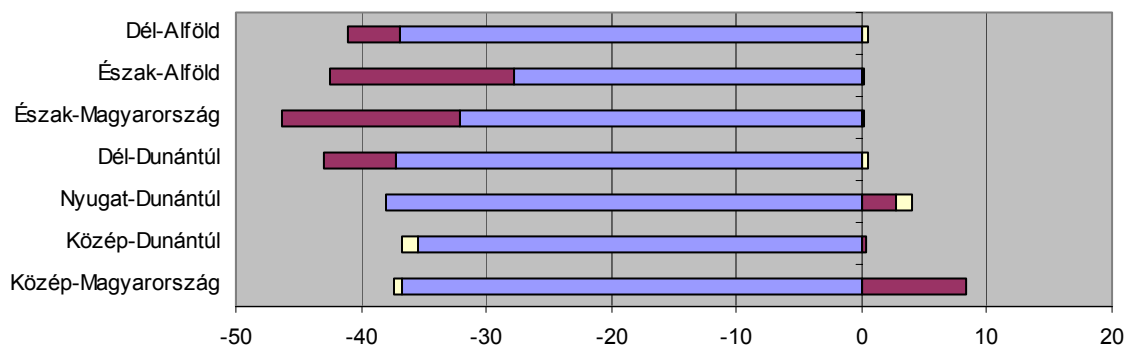




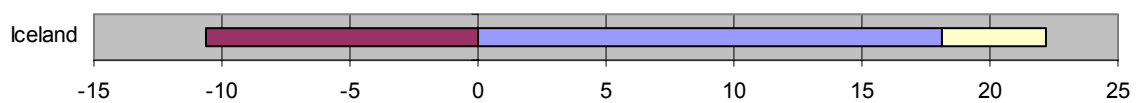
**Figure 19. Greece: Impact of migration on population change, NUTS2**



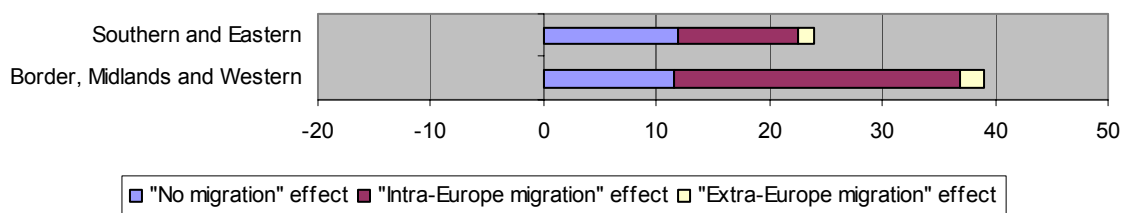
**Figure 20. Hungary: Impact of migration on population change, NUTS2**



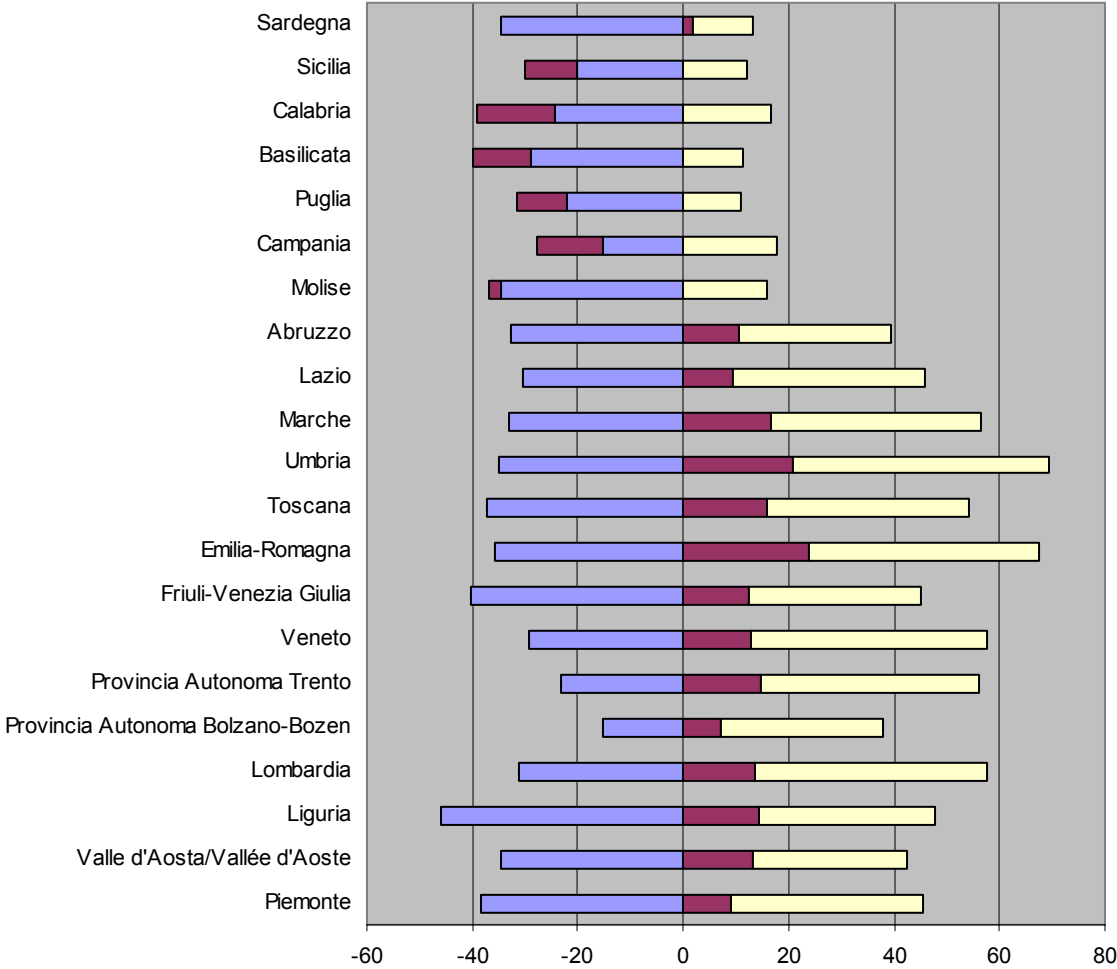
**Figure 21. Iceland: Impact of migration on population change, NUTS2**



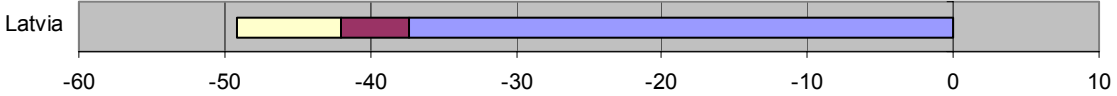
**Figure 22. Ireland: Impact of migration on population change, NUTS2**



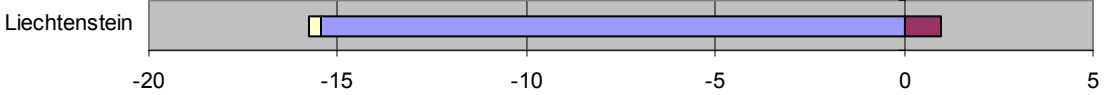
**Figure 23. Italy: Impact of migration on population change, NUTS2**



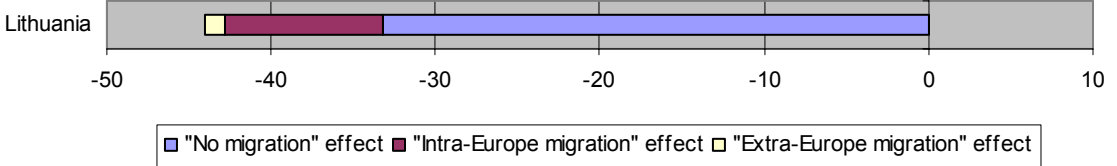
**Figure 24. Latvia: Impact of migration on population change, NUTS2**



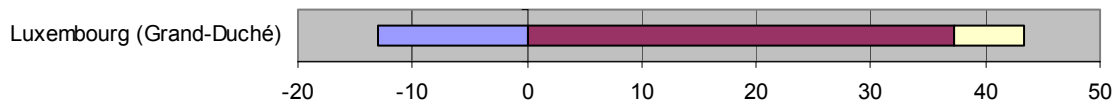
**Figure 25. Liechtenstein: Impact of migration on population change, NUTS2**



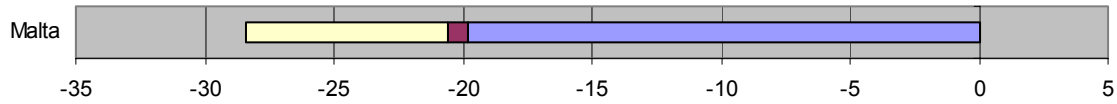
**Figure 26. Lithuania: Impact of migration on population change, NUTS2**



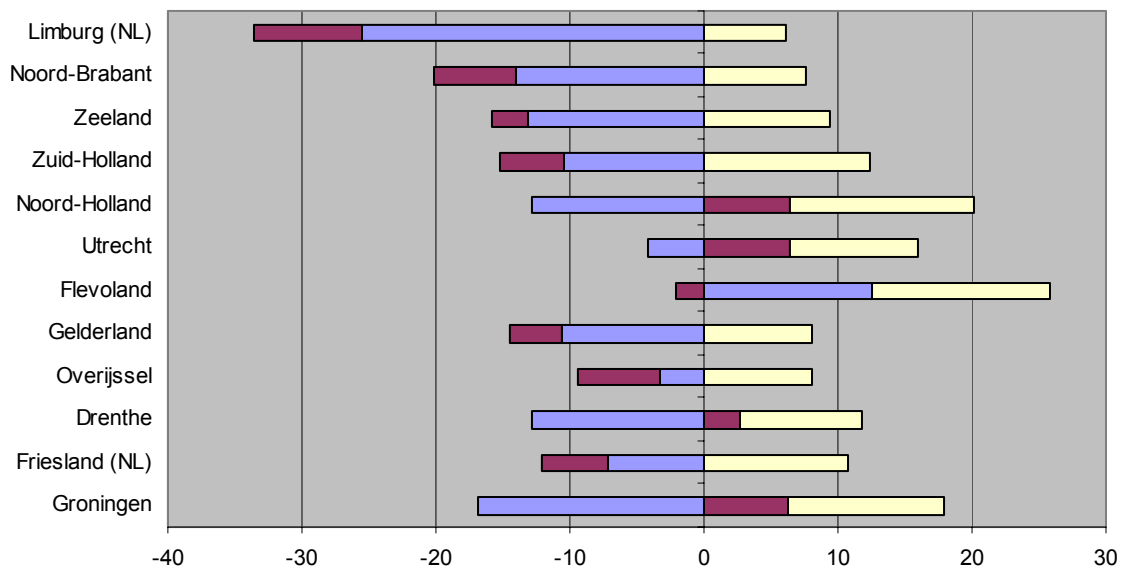
**Figure 27. Luxembourg: Impact of migration on population change, NUTS2**



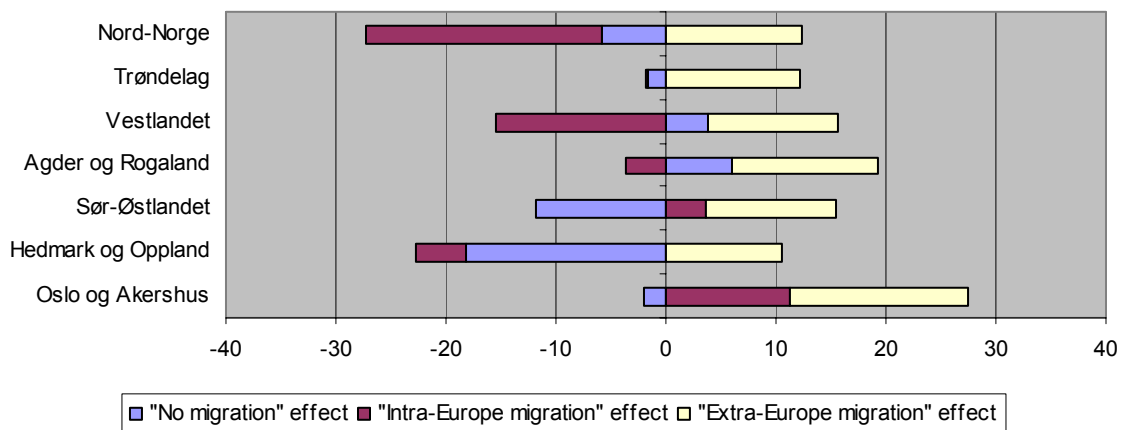
**Figure 28. Malta: Impact of migration on population change, NUTS2**



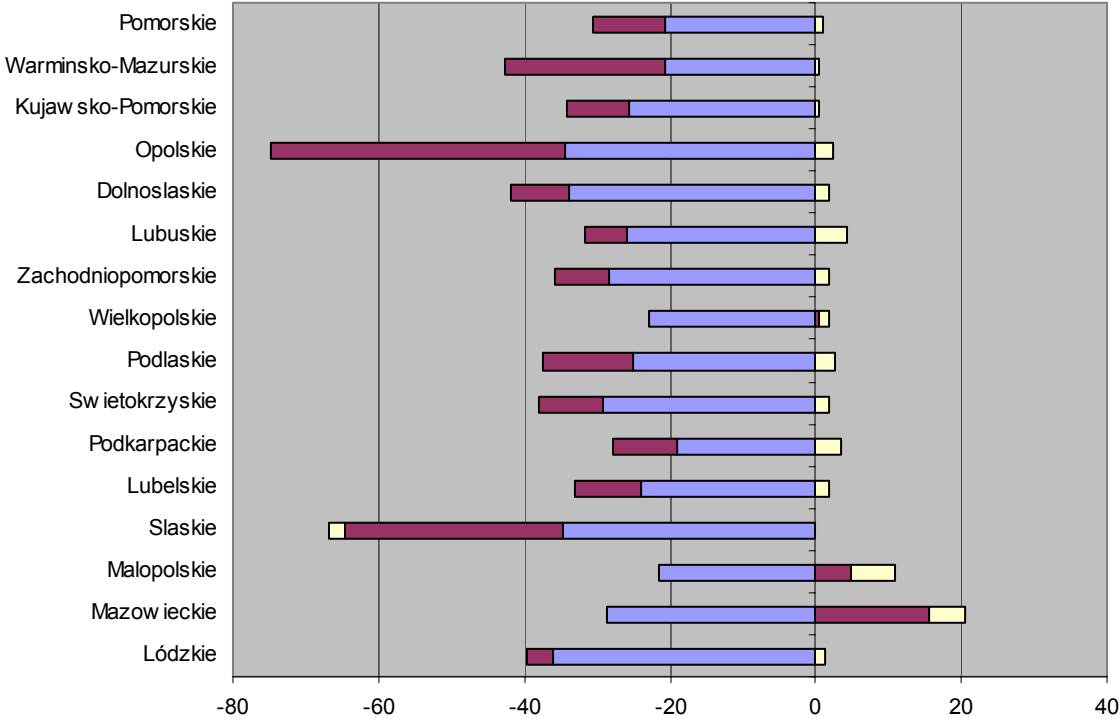
**Figure 29. Netherlands: Impact of migration on population change, NUTS2**



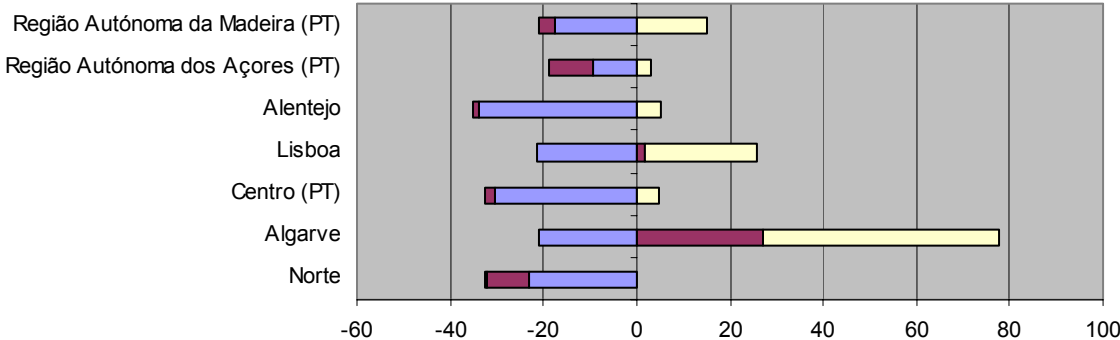
**Figure 30. Norway: Impact of migration on population change, NUTS2**



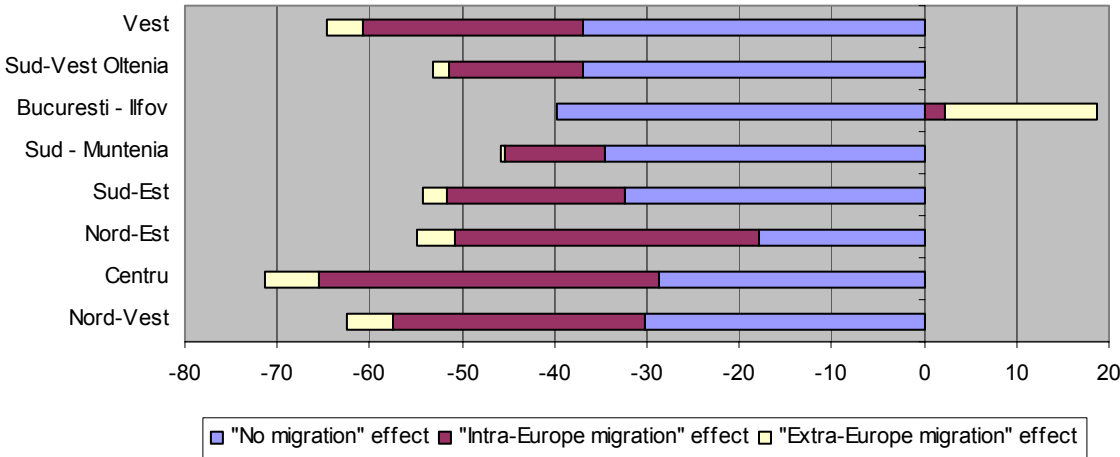
**Figure 31. Poland: Impact of migration on population change, NUTS2**



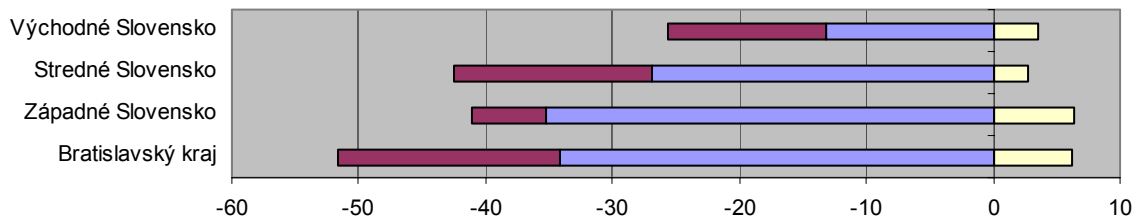
**Figure 32 .Portugal: Impact of migration on population change, NUTS2**



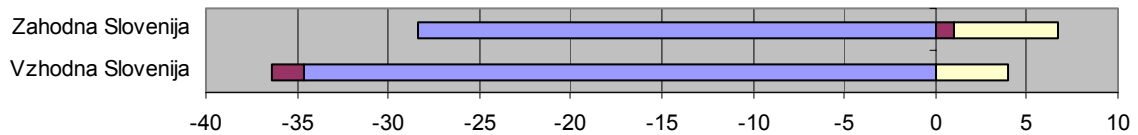
**Figure 33. Romania: Impact of migration on population change, NUTS2**



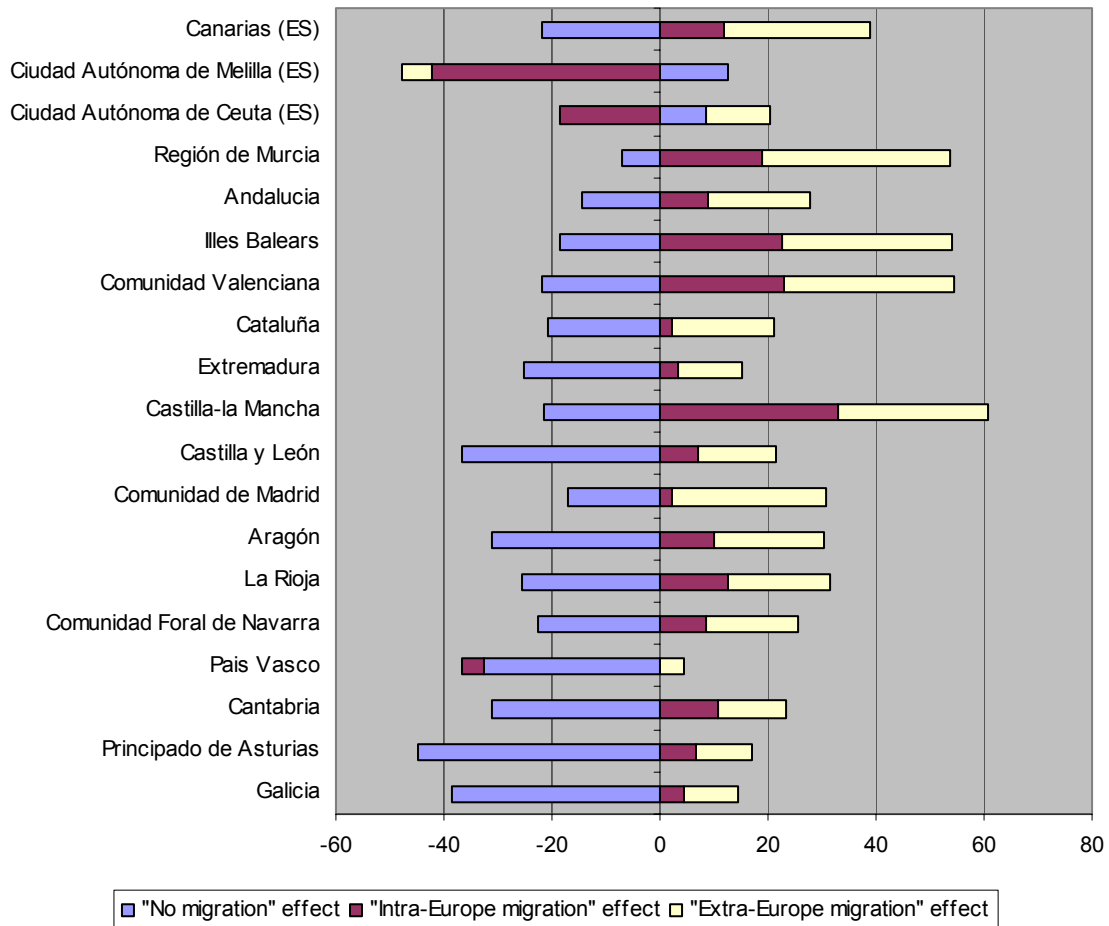
**Figure 34. Slovakia: Impact of migration on population change, NUTS2**



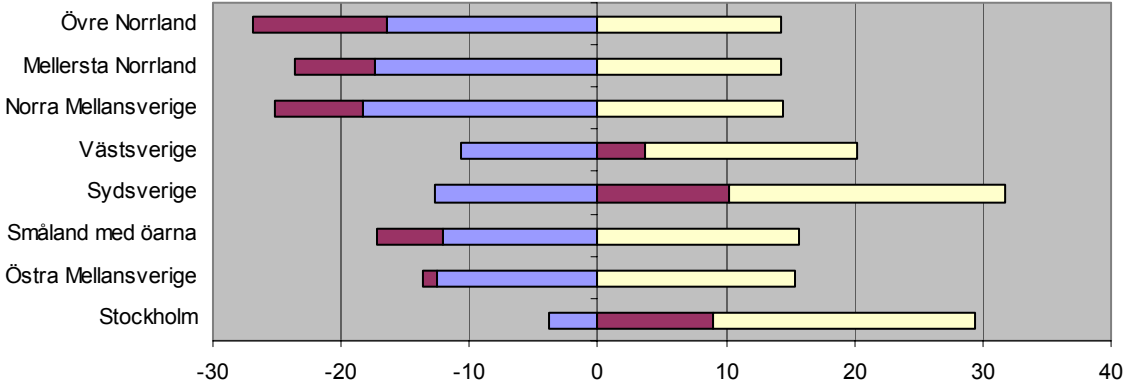
**Figure 35. Slovenia: Impact of migration on population change, NUTS2**



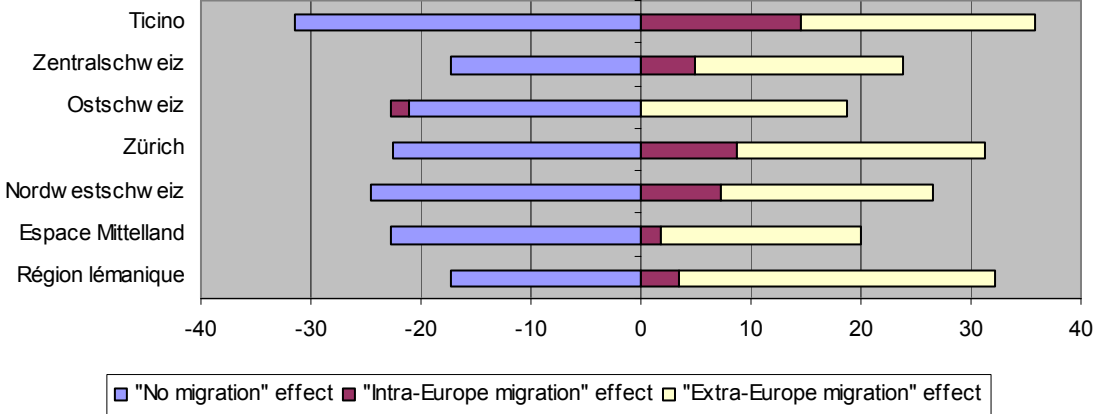
**Figure 36. Spain: Impact of migration on population change, NUTS2**



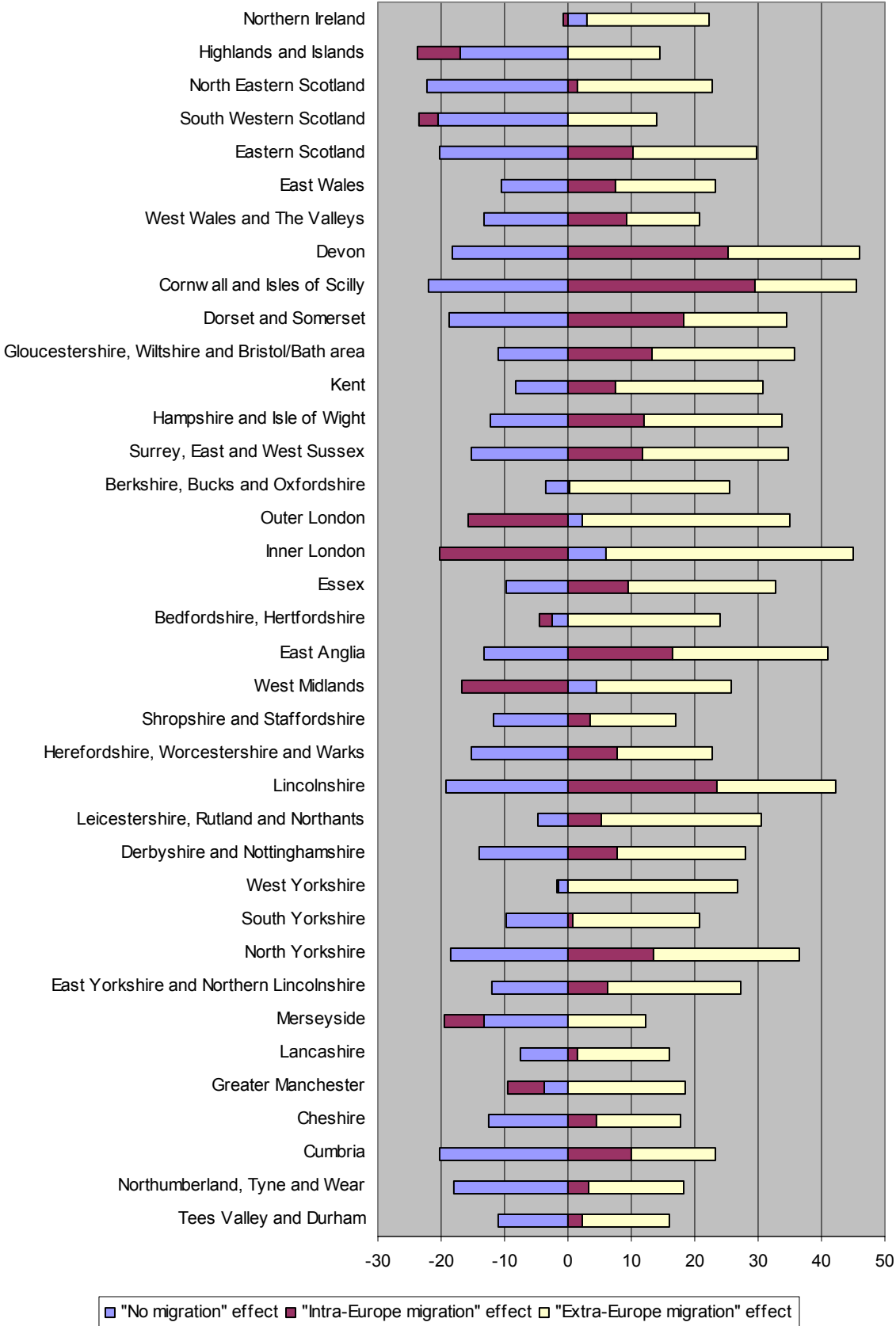
**Figure 37. Sweden: Impact of migration on population change, NUTS2**



**Figure 38. Switzerland: Impact of migration on population change, NUTS2**

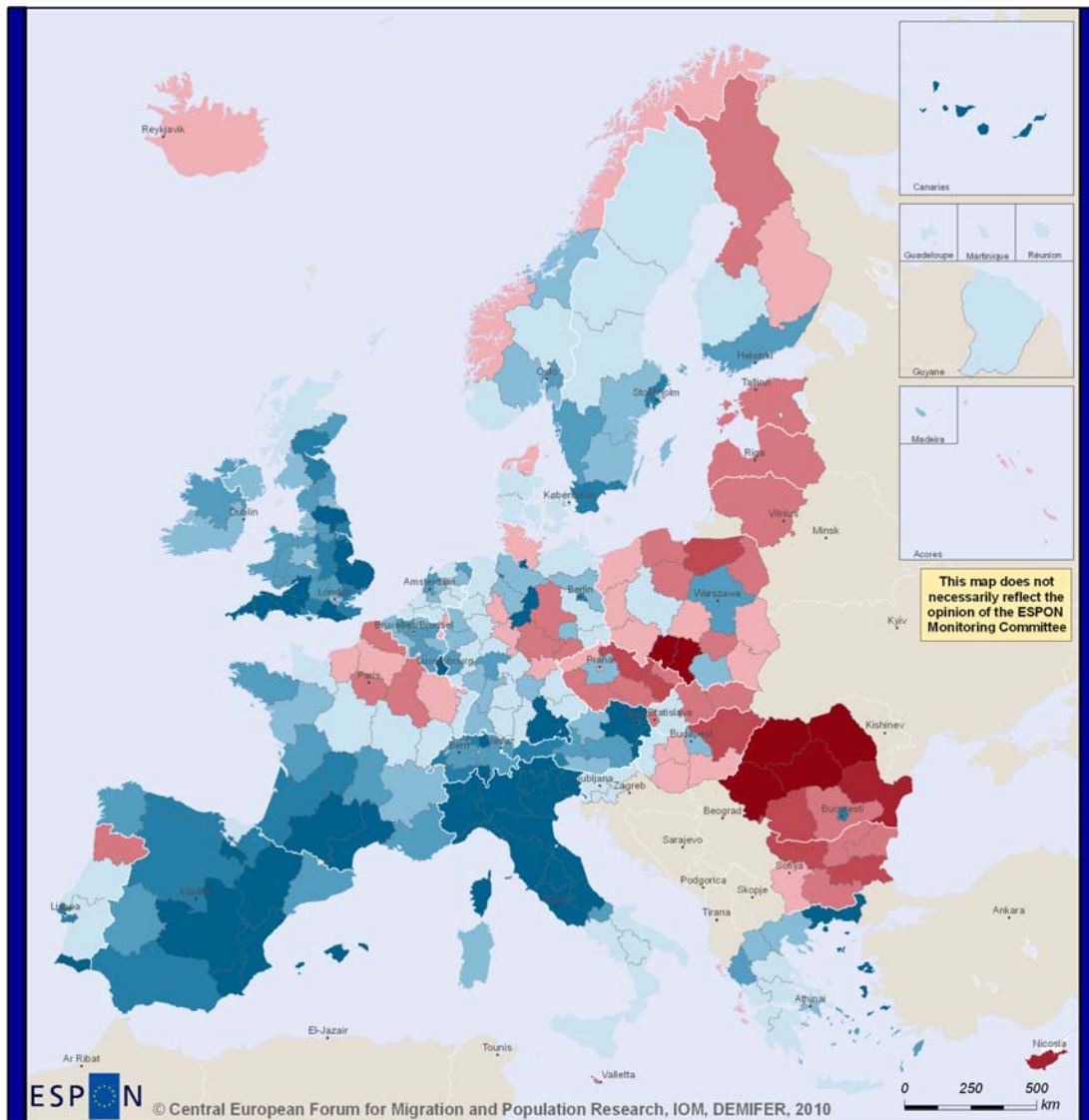


**Figure 39. United Kingdom: Impact of migration on population change, NUTS2**



Map 7. Impact of migration on population, 2050

## Impact of Migration on Population in 2050



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### Impact of Migration on Population in 2050, Difference in Population in %

|            |               |      |
|------------|---------------|------|
| Dark Red   | -60.0 – -40.0 | (7)  |
| Red        | -40.0 – -30.0 | (2)  |
| Light Red  | -30.0 – -20.0 | (8)  |
| Light Red  | -20.0 – -10.0 | (26) |
| Light Red  | -10.0 – 0.0   | (28) |
| Light Blue | 0.0 – 10.0    | (63) |
| Light Blue | 10.0 – 20.0   | (42) |
| Light Blue | 20.0 – 30.0   | (43) |
| Light Blue | 30.0 – 40.0   | (24) |
| Dark Blue  | 40.0 – 107.0  | (44) |
| White      | no data       |      |

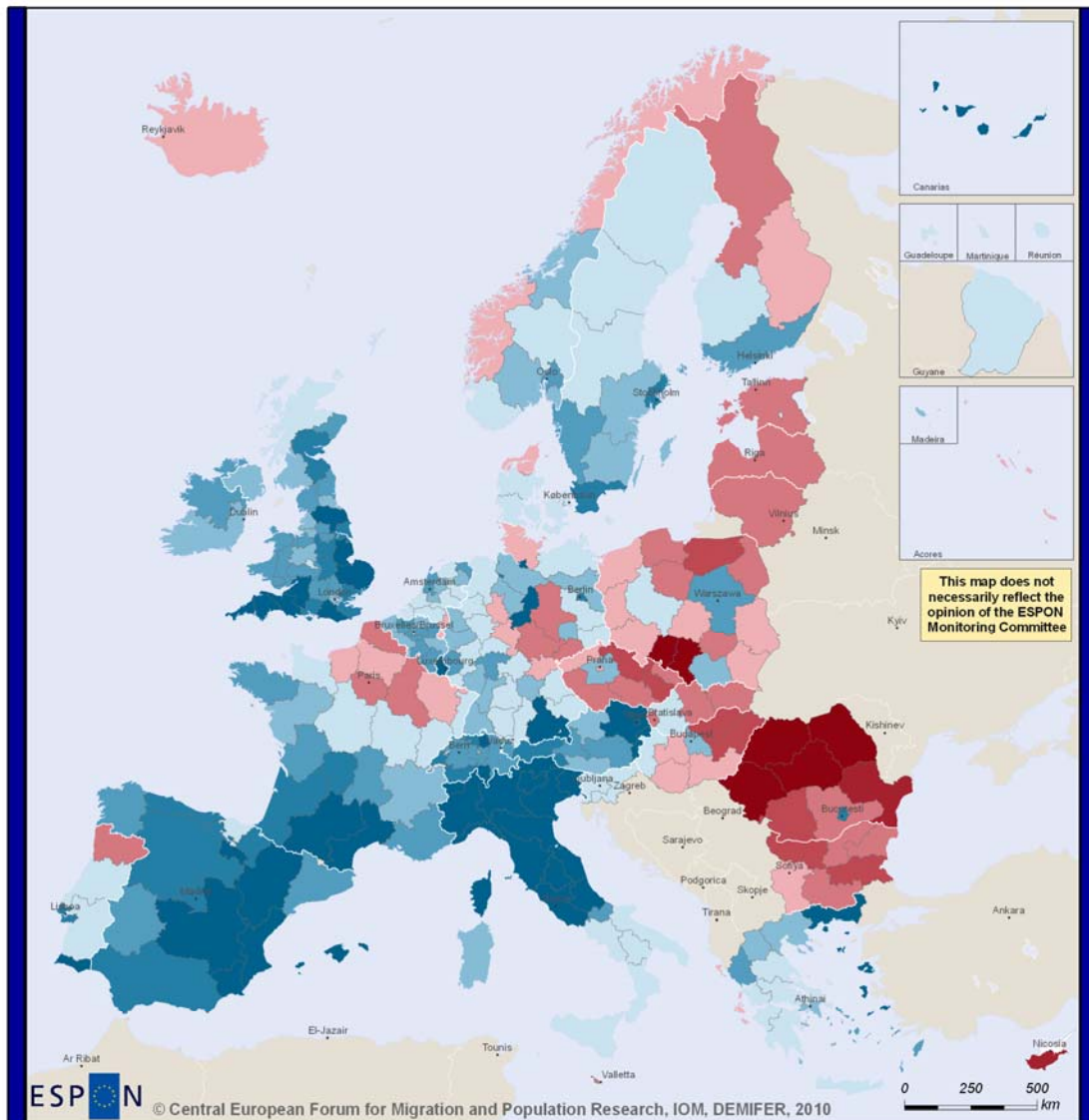
Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
© EuroGeographics Association for administrative boundaries

Impact of migration on population in 2050,  
calculated as the difference in population  
in the Status Quo and No Migration  
scenarios in % of the population in the  
No Migration scenario



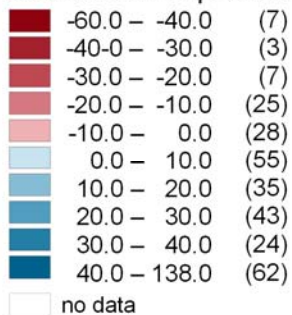
Map 8. Impact of migration on labour force, 2050

## Impact of Migration on Labour Force in 2050



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### Impact of Migration on Labour Force in 2050, Difference in Population in %

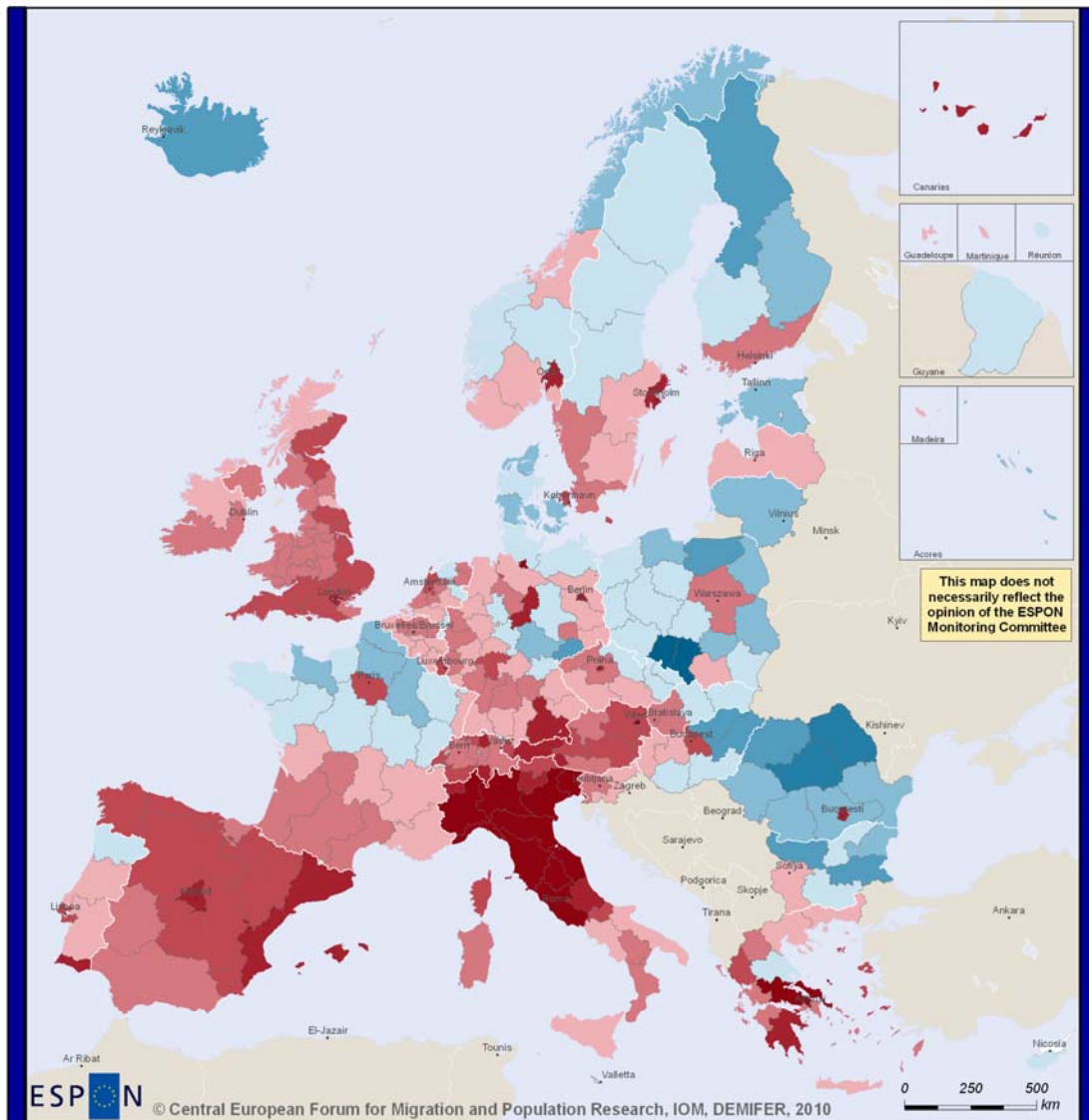


Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
© EuroGeographics Association for administrative boundaries

Impact of migration on labour force in 2050,  
calculated as the difference in labour force  
in the Status Quo and No Migration  
scenarios in % of the labour force in the  
No Migration scenario

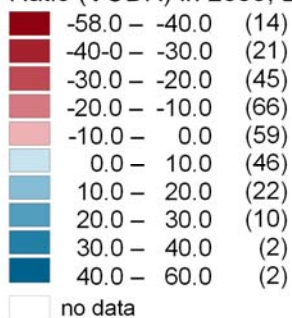
Map 9. Impact of migration on VODR, 2050

## Impact of Migration on VODR in 2050



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Impact of Migration on Very Old Age Dependency Ratio (VODR) in 2050, Difference in VODR in %



Regional level: NUTS 2  
 Source: ESPON 2013 Database, 2010  
 Origin of data: Eurostat, NSIs, Estimations, 2010  
 © EuroGeographics Association for administrative boundaries

Impact of migration on Very Old Age Dependency Ratio (VODR) in 2050, calculated as a difference in VODR between the Status Quo and No Migration scenarios in % of VODR in the No Migration scenario

## Appendix C. Dependency ratios in three reference scenarios: tables and maps

Table 3. Dependency ratios ODR and VODR according to three reference scenarios

|                |                       | ODR  |             |             |             | VODR |             |             |             |
|----------------|-----------------------|------|-------------|-------------|-------------|------|-------------|-------------|-------------|
|                |                       | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| Austria        |                       |      |             |             |             |      |             |             |             |
| AT11           | Burgenland (A)        | 28.4 | 54.2        | 51.0        | 43.1        | 18.6 | 44.4        | 39.0        | 31.6        |
| AT12           | Niederösterreich      | 25.3 | 47.5        | 49.0        | 41.3        | 16.2 | 38.4        | 37.1        | 29.9        |
| AT13           | Wien                  | 22.1 | 57.8        | 42.7        | 33.8        | 16.5 | 46.5        | 32.3        | 24.0        |
| AT21           | Kärnten               | 25.7 | 52.4        | 57.5        | 48.9        | 18.1 | 44.7        | 48.9        | 40.0        |
| AT22           | Steiermark            | 25.5 | 55.6        | 52.6        | 44.3        | 17.4 | 45.1        | 41.8        | 33.7        |
| AT31           | Oberösterreich        | 23.2 | 47.3        | 50.9        | 42.4        | 14.8 | 37.2        | 39.8        | 31.6        |
| AT32           | Salzburg              | 20.6 | 51.6        | 50.5        | 40.6        | 13.0 | 40.0        | 38.3        | 29.2        |
| AT33           | Tirol                 | 20.7 | 53.3        | 50.6        | 40.3        | 13.0 | 42.7        | 39.1        | 29.4        |
| AT34           | Vorarlberg            | 19.5 | 47.2        | 47.2        | 38.1        | 11.5 | 36.2        | 35.4        | 27.1        |
| Belgium        |                       |      |             |             |             |      |             |             |             |
| BE10           | Brussels              |      |             |             |             |      |             |             |             |
|                | Hoofdstedelijk Gewest | 23.3 | 38.7        | 37.0        | 31.7        | 18.4 | 31.1        | 30.9        | 24.8        |
| BE21           | Prov. Antwerpen       | 26.9 | 43.0        | 43.4        | 39.6        | 18.2 | 35.6        | 35.8        | 31.3        |
| BE22           | Prov. Limburg (B)     | 22.8 | 49.0        | 48.3        | 43.8        | 14.1 | 41.1        | 40.9        | 35.6        |
| BE23           | Prov. Oost-Vlaanderen | 27.3 | 45.6        | 43.6        | 40.9        | 17.5 | 36.5        | 34.4        | 31.3        |
| BE24           | Prov. Vlaams Brabant  | 26.6 | 44.5        | 46.3        | 41.9        | 17.0 | 36.3        | 36.5        | 31.6        |
| BE25           | Prov. West-Vlaanderen | 30.5 | 46.0        | 45.9        | 43.4        | 20.0 | 37.4        | 37.1        | 34.2        |
| BE31           | Prov. Brabant Wallon  | 23.4 | 37.3        | 43.6        | 39.7        | 16.4 | 31.8        | 36.5        | 31.7        |
| BE32           | Prov. Hainaut         | 26.1 | 35.8        | 38.1        | 35.4        | 20.9 | 31.2        | 32.8        | 29.4        |
| BE33           | Prov. Liège           | 26.7 | 37.9        | 38.9        | 36.2        | 19.7 | 31.6        | 32.3        | 29.0        |
| BE34           | Prov. Luxembourg (B)  | 25.2 | 34.8        | 36.0        | 33.9        | 18.0 | 28.9        | 28.6        | 26.1        |
| BE35           | Prov. Namur           | 25.2 | 35.5        | 36.9        | 34.8        | 18.2 | 29.3        | 29.7        | 27.1        |
| Bulgaria       |                       |      |             |             |             |      |             |             |             |
| BG31           | Severozapaden         | 32.8 | 34.2        | 42.3        | 41.4        | 24.6 | 26.7        | 32.7        | 32.2        |
| BG32           | Severen tsentralen    | 25.6 | 42.7        | 45.6        | 44.3        | 17.0 | 27.4        | 30.6        | 30.1        |
| BG33           | Severoiztochen        | 21.9 | 39.9        | 43.8        | 42.8        | 13.4 | 25.3        | 29.2        | 28.9        |
| BG34           | Yugoiztochen          | 24.6 | 35.5        | 42.0        | 41.2        | 15.6 | 24.0        | 29.5        | 29.2        |
| BG41           | Yugozapaden           | 23.1 | 51.9        | 47.9        | 46.5        | 14.5 | 30.7        | 29.6        | 29.1        |
| BG42           | Yuzhen tsentralen     | 24.2 | 42.7        | 45.3        | 44.2        | 15.5 | 29.3        | 32.0        | 31.6        |
| Switzerland    |                       |      |             |             |             |      |             |             |             |
| CH01           | Région lémanique      | 22.3 | 53.4        | 52.4        | 41.0        | 13.6 | 39.1        | 37.1        | 27.4        |
| CH02           | Espace Mittelland     | 24.9 | 52.8        | 56.7        | 47.7        | 14.8 | 36.2        | 38.0        | 30.6        |
| CH03           | Nordwestschweiz       | 23.5 | 57.2        | 54.6        | 46.0        | 13.4 | 39.5        | 37.9        | 30.5        |
| CH04           | Zürich                | 22.6 | 60.3        | 53.2        | 43.7        | 12.7 | 41.2        | 34.9        | 27.3        |
| CH05           | Ostschweiz            | 23.0 | 51.5        | 57.6        | 47.9        | 13.4 | 34.7        | 37.9        | 30.1        |
| CH06           | Zentralschweiz        | 21.3 | 52.2        | 53.2        | 45.2        | 11.6 | 35.5        | 35.3        | 28.7        |
| CH07           | Ticino                | 27.8 | 67.1        | 58.0        | 47.9        | 17.7 | 55.5        | 45.6        | 35.8        |
| CY00           | Cyprus                | 17.3 | 44.9        | 47.5        | 44.8        | 9.9  | 27.3        | 28.7        | 28.4        |
| Czech Republic |                       |      |             |             |             |      |             |             |             |
| CZ01           | Praha                 | 21.9 | 59.0        | 46.9        | 36.1        | 14.0 | 34.7        | 26.9        | 22.5        |
| CZ02           | Střední Čechy         | 20.0 | 46.1        | 45.0        | 38.8        | 12.3 | 27.3        | 25.9        | 24.3        |
| CZ03           | Jihozápad             | 20.1 | 48.6        | 48.7        | 43.3        | 11.9 | 28.6        | 28.8        | 27.1        |
| CZ04           | Severozápad           | 17.3 | 41.9        | 43.8        | 36.3        | 10.0 | 23.8        | 25.2        | 21.2        |
| CZ05           | Severovýchod          | 20.0 | 47.6        | 49.2        | 44.8        | 12.5 | 28.9        | 30.4        | 29.6        |
| CZ06           | Jihovýchod            | 20.5 | 50.0        | 51.0        | 44.8        | 13.0 | 30.5        | 31.7        | 29.2        |
| CZ07           | Střední Morava        | 20.0 | 50.2        | 51.8        | 48.3        | 12.5 | 31.0        | 32.9        | 32.6        |
| CZ08           | Moravskoslezsko       | 18.0 | 44.9        | 47.6        | 43.9        | 11.0 | 28.1        | 30.4        | 28.9        |
| Germany        |                       |      |             |             |             |      |             |             |             |
| DE11           | Stuttgart             | 26.2 | 54.4        | 54.5        | 48.8        | 14.7 | 41.8        | 41.4        | 36.1        |
| DE12           | Karlsruhe             | 27.0 | 56.7        | 55.4        | 49.2        | 15.9 | 44.3        | 43.2        | 37.1        |
| DE13           | Freiburg              | 27.1 | 53.4        | 55.4        | 49.6        | 15.5 | 40.5        | 41.8        | 36.5        |
| DE14           | Tübingen              | 25.5 | 51.3        | 55.7        | 49.7        | 14.6 | 39.5        | 42.8        | 37.2        |
| DE21           | Oberbayern            | 25.2 | 57.8        | 47.5        | 43.0        | 14.5 | 44.4        | 34.5        | 30.4        |
| DE22           | Niederbayern          | 26.7 | 49.8        | 52.8        | 47.9        | 15.2 | 36.5        | 38.5        | 34.0        |
| DE23           | Oberpfalz             | 26.8 | 50.1        | 52.4        | 48.1        | 15.3 | 37.1        | 38.9        | 34.9        |
| DE24           | Oberfranken           | 30.0 | 51.3        | 57.2        | 52.6        | 17.5 | 38.3        | 43.4        | 39.1        |
| DE25           | Mittelfranken         | 27.6 | 53.8        | 52.6        | 47.5        | 16.2 | 41.3        | 39.6        | 34.8        |
| DE26           | Unterfranken          | 27.7 | 52.2        | 57.3        | 52.2        | 16.3 | 39.3        | 43.9        | 39.1        |
| DE27           | Schwaben              | 27.2 | 48.5        | 52.4        | 48.0        | 15.9 | 36.5        | 39.0        | 34.9        |

**Table 3. continued**

|      |                        | ODR  |             |             |             | VODR |             |             |             |
|------|------------------------|------|-------------|-------------|-------------|------|-------------|-------------|-------------|
|      |                        | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| DE30 | Berlin                 | 23.3 | 69.1        | 50.6        | 44.6        | 13.0 | 51.5        | 37.1        | 31.9        |
| DE41 | Brandenburg - Nordost  | 26.5 | 56.3        | 62.2        | 56.2        | 12.7 | 41.5        | 43.9        | 38.7        |
|      | Brandenburg -          |      |             |             |             |      |             |             |             |
| DE42 | Südwest                | 27.1 | 59.1        | 62.3        | 56.9        | 13.3 | 42.5        | 44.3        | 39.8        |
| DE50 | Bremen                 | 29.9 | 60.8        | 48.4        | 43.9        | 19.5 | 47.8        | 38.4        | 33.9        |
| DE60 | Hamburg                | 26.0 | 67.9        | 43.4        | 39.7        | 16.0 | 50.8        | 30.9        | 27.8        |
| DE71 | Darmstadt              | 26.0 | 57.1        | 50.8        | 45.0        | 15.5 | 46.4        | 39.8        | 34.1        |
| DE72 | Gießen                 | 27.5 | 53.5        | 56.2        | 50.8        | 16.7 | 40.9        | 44.4        | 39.1        |
| DE73 | Kassel                 | 30.9 | 50.9        | 58.5        | 52.7        | 19.5 | 41.0        | 47.2        | 41.5        |
|      | Mecklenburg-           |      |             |             |             |      |             |             |             |
| DE80 | Vorpommern             | 26.7 | 56.5        | 62.3        | 57.4        | 12.8 | 39.5        | 44.9        | 40.6        |
| DE91 | Braunschweig           | 30.5 | 53.8        | 52.0        | 42.1        | 19.5 | 43.5        | 40.1        | 30.2        |
| DE92 | Hannover               | 30.2 | 53.6        | 53.4        | 48.3        | 18.5 | 43.3        | 42.3        | 37.2        |
| DE93 | Lüneburg               | 28.5 | 45.2        | 50.5        | 46.7        | 17.0 | 37.7        | 39.2        | 35.4        |
| DE94 | Weser-Ems              | 26.7 | 44.7        | 50.0        | 45.3        | 15.8 | 35.6        | 39.4        | 34.6        |
| DEA1 | Düsseldorf             | 29.7 | 50.2        | 48.3        | 44.4        | 17.9 | 41.3        | 38.5        | 34.6        |
| DEA2 | Köln                   | 26.5 | 53.5        | 49.8        | 45.4        | 16.3 | 44.5        | 40.9        | 36.4        |
| DEA3 | Münster                | 27.2 | 46.8        | 50.3        | 46.5        | 16.9 | 38.2        | 41.0        | 37.1        |
| DEA4 | Detmold                | 29.1 | 46.8        | 52.5        | 48.5        | 17.4 | 36.2        | 40.9        | 37.0        |
| DEA5 | Arnsberg               | 29.5 | 48.8        | 50.5        | 46.0        | 18.3 | 39.4        | 40.8        | 36.1        |
| DEB1 | Koblenz                | 30.4 | 47.3        | 51.6        | 47.7        | 18.6 | 37.2        | 39.7        | 35.9        |
| DEB2 | Trier                  | 30.1 | 51.2        | 49.9        | 45.6        | 18.6 | 39.0        | 37.3        | 33.3        |
| DEB3 | Rheinhausen-Pfalz      | 28.0 | 52.4        | 52.1        | 47.4        | 17.0 | 42.3        | 41.5        | 36.8        |
| DEC0 | Saarland               | 31.1 | 52.6        | 57.2        | 51.6        | 19.4 | 43.2        | 48.1        | 42.3        |
| DED1 | Chemnitz               | 33.6 | 58.5        | 73.2        | 67.3        | 19.2 | 40.3        | 53.8        | 48.6        |
| DED2 | Dresden                | 31.0 | 60.9        | 63.7        | 58.1        | 17.2 | 42.0        | 45.3        | 40.5        |
| DED3 | Leipzig                | 29.6 | 65.5        | 61.5        | 56.0        | 16.3 | 45.5        | 43.9        | 39.2        |
| DEE0 | Sachsen-Anhalt         | 30.1 | 58.6        | 67.9        | 61.1        | 16.6 | 42.6        | 51.4        | 45.2        |
| DEF0 | Schleswig-Holstein     | 29.1 | 49.9        | 58.8        | 53.6        | 16.8 | 40.1        | 47.4        | 42.3        |
| DEG0 | Thüringen              | 28.4 | 60.6        | 71.3        | 65.3        | 15.5 | 42.0        | 52.9        | 47.6        |
|      | Denamrk                |      |             |             |             |      |             |             |             |
| DK01 | Hovedstaden            | 21.4 | 41.5        | 35.1        | 32.8        | 12.7 | 25.6        | 22.2        | 20.4        |
| DK02 | Sjælland               | 23.9 | 29.8        | 40.8        | 38.7        | 13.2 | 21.6        | 26.6        | 24.8        |
| DK03 | Syddanmark             | 24.2 | 33.0        | 41.5        | 39.1        | 13.8 | 22.3        | 27.5        | 25.4        |
| DK04 | Midtjylland            | 21.3 | 35.1        | 38.6        | 36.4        | 12.1 | 22.6        | 25.3        | 23.4        |
| DK05 | Nordjylland            | 24.7 | 33.2        | 40.0        | 37.6        | 14.4 | 21.5        | 26.1        | 24.1        |
| EE00 | Estonia                | 24.3 | 36.2        | 39.1        | 38.9        | 13.4 | 21.0        | 23.5        | 23.8        |
|      | Spain                  |      |             |             |             |      |             |             |             |
| ES11 | Galicia                | 31.5 | 82.8        | 77.8        | 64.9        | 22.2 | 65.1        | 62.1        | 50.9        |
| ES12 | Principado de Asturias | 32.1 | 90.3        | 78.8        | 66.2        | 26.0 | 80.5        | 70.4        | 57.9        |
| ES13 | Cantabria              | 27.3 | 76.1        | 69.7        | 59.1        | 20.2 | 62.2        | 56.9        | 47.3        |
| ES21 | Pais Vasco             | 26.5 | 76.9        | 71.8        | 62.2        | 17.5 | 62.7        | 58.9        | 50.7        |
|      | Comunidad Foral de     |      |             |             |             |      |             |             |             |
| ES22 | Navarra                | 26.1 | 67.9        | 65.7        | 54.2        | 18.3 | 54.7        | 51.7        | 41.6        |
| ES23 | La Rioja               | 27.6 | 71.2        | 68.6        | 54.2        | 19.3 | 56.1        | 54.1        | 41.6        |
| ES24 | Aragón                 | 31.4 | 70.7        | 65.8        | 52.9        | 22.4 | 56.0        | 51.4        | 39.7        |
| ES30 | Comunidad de Madrid    | 20.6 | 67.1        | 56.9        | 44.2        | 12.9 | 51.8        | 42.6        | 31.7        |
| ES41 | Castilla y León        | 34.3 | 81.3        | 74.8        | 62.0        | 26.3 | 69.2        | 62.9        | 50.7        |
| ES42 | Castilla-la Mancha     | 29.0 | 61.6        | 58.9        | 48.6        | 21.5 | 50.8        | 46.2        | 36.8        |
| ES43 | Extremadura            | 28.9 | 57.3        | 58.2        | 50.4        | 21.2 | 47.0        | 47.3        | 40.0        |
| ES51 | Cataluña               | 24.6 | 63.5        | 58.6        | 45.7        | 15.6 | 46.9        | 42.9        | 32.4        |
|      | Comunidad              |      |             |             |             |      |             |             |             |
| ES52 | Valenciana             | 23.1 | 62.0        | 53.8        | 42.6        | 14.8 | 45.9        | 38.6        | 29.3        |
| ES53 | Illes Balears          | 19.8 | 63.6        | 58.9        | 46.3        | 12.5 | 48.0        | 43.2        | 32.6        |
| ES61 | Andalucía              | 21.3 | 52.0        | 51.4        | 43.8        | 14.6 | 40.6        | 39.9        | 32.9        |
| ES62 | Región de Murcia       | 20.4 | 53.3        | 51.9        | 42.0        | 13.3 | 39.9        | 38.7        | 29.9        |
|      | Ciudad Autónoma de     |      |             |             |             |      |             |             |             |
| ES63 | Ceuta (ES)             | 17.4 | 39.1        | 43.6        | 38.7        | 11.5 | 31.9        | 37.6        | 32.5        |
|      | Ciudad Autónoma de     |      |             |             |             |      |             |             |             |
| ES64 | Melilla (ES)           | 16.8 | 37.0        | 50.9        | 42.3        | 12.0 | 30.7        | 45.9        | 37.7        |
| ES70 | Canarias (ES)          | 16.7 | 66.3        | 59.8        | 47.2        | 10.0 | 54.2        | 48.1        | 36.3        |
|      | Finland                |      |             |             |             |      |             |             |             |
| FI13 | Itä-Suomi              | 28.8 | 35.0        | 43.5        | 41.4        | 18.9 | 25.8        | 33.0        | 30.8        |
| FI18 | Etelä-Suomi            | 21.6 | 42.1        | 37.4        | 35.5        | 12.7 | 28.5        | 24.6        | 22.9        |
| FI19 | Länsi-Suomi            | 26.5 | 38.4        | 40.9        | 39.0        | 16.9 | 26.3        | 28.6        | 26.9        |
| FI1A | Pohjois-Suomi          | 22.4 | 30.7        | 38.5        | 36.8        | 13.6 | 20.8        | 27.4        | 25.9        |
| FI20 | Åland                  | 25.3 | 40.1        | 43.2        | 39.2        | 16.1 | 29.1        | 29.5        | 25.6        |

Table 3. continued

|      |                                     | ODR  |             |             |             | VODR |             |             |             |
|------|-------------------------------------|------|-------------|-------------|-------------|------|-------------|-------------|-------------|
|      |                                     | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
|      | France                              |      |             |             |             |      |             |             |             |
| FR10 | Île de France                       | 18.0 | 42.0        | 34.2        | 32.6        | 12.3 | 34.3        | 27.7        | 25.9        |
| FR21 | Champagne-Ardenne                   | 25.5 | 37.9        | 46.2        | 43.6        | 17.7 | 30.3        | 38.8        | 35.6        |
| FR22 | Picardie                            | 22.7 | 33.9        | 40.8        | 38.8        | 16.1 | 28.1        | 34.4        | 31.8        |
| FR23 | Haute-Normandie                     | 23.7 | 35.5        | 40.3        | 38.4        | 16.2 | 28.4        | 33.0        | 30.6        |
| FR24 | Centre                              | 29.0 | 38.8        | 44.9        | 42.5        | 20.4 | 32.2        | 37.1        | 34.1        |
| FR25 | Basse-Normandie                     | 29.4 | 37.1        | 44.2        | 41.9        | 21.0 | 31.5        | 38.0        | 35.1        |
| FR26 | Bourgogne                           | 31.2 | 39.7        | 46.1        | 43.5        | 22.5 | 33.2        | 38.6        | 35.4        |
| FR30 | Nord - Pas-de-Calais                | 22.3 | 31.7        | 36.7        | 35.2        | 15.9 | 24.4        | 30.0        | 28.0        |
| FR41 | Lorraine                            | 24.8 | 38.9        | 43.1        | 40.8        | 17.0 | 31.7        | 36.3        | 33.5        |
| FR42 | Alsace                              | 21.8 | 41.6        | 43.9        | 41.4        | 13.7 | 32.8        | 35.2        | 32.4        |
| FR43 | Franche-Comté                       | 25.6 | 37.9        | 43.6        | 41.2        | 18.0 | 31.7        | 37.2        | 34.3        |
| FR51 | Pays de la Loire                    | 26.6 | 37.4        | 41.5        | 39.4        | 18.3 | 30.3        | 33.7        | 31.2        |
| FR52 | Bretagne                            | 29.4 | 37.5        | 41.4        | 39.3        | 20.9 | 31.3        | 34.5        | 31.9        |
| FR53 | Poitou-Charentes                    | 32.6 | 42.4        | 44.9        | 42.4        | 23.5 | 36.0        | 37.4        | 34.4        |
| FR61 | Aquitaine                           | 30.2 | 44.9        | 44.0        | 41.5        | 22.8 | 39.7        | 37.6        | 34.6        |
| FR62 | Midi-Pyrénées                       | 29.9 | 46.1        | 43.4        | 41.0        | 21.5 | 38.7        | 35.4        | 32.6        |
| FR63 | Limousin                            | 37.5 | 46.5        | 46.6        | 43.8        | 27.0 | 37.6        | 36.9        | 33.8        |
| FR71 | Rhône-Alpes                         | 23.6 | 39.7        | 40.5        | 38.5        | 16.2 | 32.5        | 33.1        | 30.7        |
| FR72 | Auvergne                            | 31.6 | 43.0        | 45.2        | 42.5        | 22.6 | 35.8        | 37.2        | 34.1        |
| FR81 | Languedoc-Roussillon                | 30.4 | 41.0        | 40.7        | 38.6        | 23.4 | 36.7        | 35.1        | 32.5        |
| FR82 | Provence-Alpes-Côte<br>d'Azur       | 29.6 | 40.8        | 41.0        | 39.0        | 22.5 | 36.4        | 35.5        | 32.8        |
| FR83 | Corse                               | 30.1 | 50.5        | 45.6        | 42.9        | 32.0 | 69.5        | 58.4        | 53.4        |
| FR91 | Guadeloupe (FR)                     | 18.5 | 26.6        | 27.7        | 27.3        | 14.1 | 27.1        | 28.1        | 26.7        |
| FR92 | Martinique (FR)                     | 20.2 | 36.7        | 38.0        | 36.6        | 15.1 | 39.4        | 40.5        | 37.7        |
| FR93 | Guyane (FR)                         | 6.6  | 14.6        | 15.5        | 15.9        | 6.1  | 16.4        | 17.5        | 17.3        |
| FR94 | Reunion (FR)                        | 11.6 | 24.0        | 25.0        | 24.7        | 7.9  | 21.5        | 22.5        | 21.6        |
|      | Greece                              |      |             |             |             |      |             |             |             |
| GR11 | Anatoliki Makedonia,<br>Thraki      | 30.3 | 50.9        | 51.6        | 46.6        | 17.0 | 34.2        | 36.4        | 32.1        |
| GR12 | Kentriki Makedonia                  | 26.5 | 57.0        | 62.5        | 55.6        | 15.2 | 43.8        | 49.3        | 42.8        |
| GR13 | Dytiki Makedonia                    | 31.0 | 54.2        | 54.7        | 49.2        | 19.3 | 43.2        | 42.1        | 36.9        |
| GR14 | Thessalia                           | 30.8 | 51.2        | 61.9        | 55.0        | 18.0 | 37.5        | 45.2        | 39.1        |
| GR21 | Ipeiros                             | 33.5 | 63.9        | 53.2        | 47.6        | 23.1 | 48.7        | 39.4        | 34.6        |
| GR22 | Ionía Nisia                         | 32.2 | 56.7        | 56.9        | 50.8        | 20.5 | 45.6        | 42.7        | 37.2        |
| GR23 | Dytiki Ellada                       | 28.1 | 58.6        | 54.7        | 48.9        | 19.1 | 46.1        | 42.6        | 37.2        |
| GR24 | Sterea Ellada                       | 31.8 | 59.1        | 43.8        | 39.5        | 19.9 | 46.9        | 31.3        | 27.5        |
| GR25 | Peloponnisos                        | 35.2 | 59.0        | 47.4        | 42.7        | 22.5 | 46.4        | 34.2        | 30.0        |
| GR30 | Attiki                              | 22.9 | 64.0        | 59.7        | 53.2        | 14.5 | 51.6        | 48.3        | 41.9        |
| GR41 | Voreio Aigaio                       | 34.1 | 62.7        | 53.3        | 48.1        | 26.9 | 48.9        | 44.3        | 39.1        |
| GR42 | Notio Aigaio                        | 21.7 | 53.8        | 52.7        | 47.7        | 14.7 | 44.4        | 43.3        | 38.2        |
| GR43 | Kriti                               | 25.9 | 52.3        | 59.4        | 53.1        | 16.5 | 39.0        | 44.3        | 38.6        |
|      | Hungary                             |      |             |             |             |      |             |             |             |
| HU10 | Közép-Magyarország                  | 23.2 | 48.9        | 39.0        | 36.1        | 16.1 | 32.7        | 26.0        | 24.9        |
| HU21 | Közép-Dunántúl                      | 21.0 | 41.0        | 41.3        | 39.5        | 13.2 | 27.1        | 27.6        | 27.0        |
| HU22 | Nyugat-Dunántúl                     | 22.4 | 45.8        | 45.9        | 43.6        | 15.1 | 30.2        | 30.9        | 29.6        |
| HU23 | Dél-Dunántúl                        | 23.1 | 39.4        | 42.3        | 40.4        | 16.8 | 28.9        | 32.1        | 31.0        |
| HU31 | Észak-Magyarország                  | 23.6 | 33.4        | 40.5        | 39.0        | 17.4 | 24.9        | 32.1        | 31.3        |
| HU32 | Észak-Alföld                        | 21.2 | 33.9        | 39.9        | 38.2        | 16.3 | 25.7        | 32.0        | 31.1        |
| HU33 | Dél-Alföld                          | 24.1 | 40.6        | 43.8        | 41.6        | 18.3 | 30.1        | 33.8        | 32.6        |
|      | Ireland                             |      |             |             |             |      |             |             |             |
| IE01 | Border, Midlands and<br>Western     | 18.4 | 34.0        | 37.5        | 36.0        | 12.0 | 22.6        | 23.5        | 22.6        |
| IE02 | Southern and Eastern                | 15.7 | 38.2        | 35.9        | 34.4        | 9.4  | 24.0        | 22.3        | 21.5        |
| IS00 | Iceland                             | 17.9 | 34.8        | 43.4        | 43.2        | 9.4  | 19.1        | 23.6        | 23.4        |
|      | Italy                               |      |             |             |             |      |             |             |             |
| ITC1 | Piemonte                            | 33.9 | 68.4        | 61.2        | 45.4        | 23.1 | 63.1        | 54.2        | 36.5        |
| ITC2 | Valle d'Aosta/Vallée<br>d'Aoste     | 29.8 | 64.7        | 60.4        | 47.8        | 20.0 | 59.1        | 53.2        | 39.0        |
| ITC3 | Liguria                             | 42.4 | 73.0        | 61.2        | 45.9        | 31.9 | 72.7        | 56.4        | 38.4        |
| ITC4 | Lombardia                           | 28.4 | 65.9        | 57.5        | 42.9        | 18.1 | 59.9        | 49.3        | 33.1        |
| ITD1 | Provincia Autonoma<br>Bolzano-Bozen | 24.5 | 52.7        | 50.8        | 41.6        | 15.8 | 45.0        | 42.1        | 31.9        |
| ITD2 | Provincia Autonoma<br>Trento        | 27.9 | 57.0        | 53.4        | 41.8        | 20.1 | 52.7        | 47.2        | 33.8        |
| ITD3 | Veneto                              | 28.1 | 66.4        | 60.3        | 44.6        | 19.4 | 61.7        | 53.6        | 35.8        |
| ITD4 | Friuli-Venezia Giulia               | 33.7 | 72.1        | 64.4        | 48.4        | 25.1 | 69.2        | 59.4        | 40.8        |
| ITD5 | Emilia-Romagna                      | 34.8 | 72.0        | 61.1        | 45.9        | 23.9 | 64.9        | 51.3        | 35.1        |
| ITE1 | Toscana                             | 35.5 | 72.0        | 62.8        | 47.0        | 25.8 | 66.6        | 55.1        | 37.7        |
| ITE2 | Umbria                              | 36.1 | 68.6        | 59.7        | 44.1        | 27.2 | 62.9        | 52.0        | 35.0        |
| ITE3 | Marche                              | 34.6 | 69.6        | 62.1        | 47.1        | 24.9 | 62.3        | 53.4        | 37.1        |

**Table 3. continued**

|             |                                 | ODR  |             |             |             | VODR |             |             |             |
|-------------|---------------------------------|------|-------------|-------------|-------------|------|-------------|-------------|-------------|
|             |                                 | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| ITE4        | Lazio                           | 27.9 | 63.4        | 55.5        | 42.6        | 19.4 | 59.4        | 49.8        | 34.9        |
| ITF1        | Abruzzo                         | 32.2 | 67.4        | 61.2        | 48.4        | 25.1 | 63.8        | 56.4        | 41.6        |
| ITF2        | Molise                          | 33.6 | 66.4        | 64.4        | 53.2        | 27.9 | 65.4        | 64.2        | 50.4        |
| ITF3        | Campania                        | 22.4 | 47.5        | 51.7        | 44.1        | 18.6 | 46.6        | 53.7        | 43.8        |
| ITF4        | Puglia                          | 25.2 | 58.0        | 62.5        | 54.6        | 21.4 | 58.5        | 66.3        | 55.7        |
| ITF5        | Basilicata                      | 29.9 | 62.0        | 65.1        | 55.2        | 24.2 | 61.4        | 67.2        | 54.5        |
| ITF6        | Calabria                        | 27.0 | 58.0        | 62.9        | 50.6        | 23.2 | 58.2        | 67.9        | 51.4        |
| ITG1        | Sicilia                         | 26.8 | 51.1        | 55.8        | 48.5        | 23.3 | 51.1        | 58.5        | 48.5        |
| ITG2        | Sardegna                        | 24.6 | 75.3        | 73.0        | 62.8        | 18.5 | 72.8        | 71.4        | 59.2        |
| LI00        | Liechtenstein                   | 15.6 | 51.5        | 53.9        | 52.8        | 8.6  | 35.6        | 36.5        | 35.6        |
| LT00        | Lithuania                       | 22.3 | 37.9        | 41.7        | 41.3        | 12.8 | 24.6        | 28.0        | 27.9        |
| LU00        | Luxembourg (Grand-Duché)        | 20.9 | 43.2        | 36.0        | 35.3        | 13.9 | 38.3        | 28.7        | 27.8        |
| LV00        | Latvia                          | 24.1 | 38.4        | 38.1        | 37.2        | 13.3 | 22.3        | 22.2        | 22.0        |
| MT00        | Malta                           | 19.3 | 45.4        | 45.8        | 45.3        | 13.5 | 36.0        | 36.7        | 37.3        |
| Netherlands |                                 |      |             |             |             |      |             |             |             |
| NL11        | Groningen                       | 21.2 | 46.3        | 40.7        | 36.9        | 13.5 | 30.5        | 29.5        | 26.0        |
| NL12        | Friesland (NL)                  | 22.5 | 36.3        | 42.1        | 38.5        | 13.4 | 26.4        | 30.0        | 26.6        |
| NL13        | Drenthe                         | 24.7 | 36.0        | 39.4        | 36.4        | 14.4 | 28.3        | 28.1        | 25.3        |
| NL21        | Overijssel                      | 21.2 | 35.6        | 39.9        | 36.7        | 12.3 | 24.6        | 27.9        | 25.1        |
| NL22        | Gelderland                      | 21.2 | 37.6        | 41.3        | 38.0        | 12.2 | 27.0        | 29.3        | 26.4        |
| NL23        | Flevoland                       | 12.7 | 33.3        | 33.6        | 30.5        | 7.2  | 24.4        | 23.2        | 20.4        |
| NL31        | Utrecht                         | 18.4 | 41.0        | 37.7        | 34.6        | 10.8 | 28.5        | 26.2        | 23.5        |
| NL32        | Noord-Holland                   | 19.9 | 43.7        | 39.8        | 35.6        | 11.9 | 31.9        | 28.3        | 24.3        |
| NL33        | Zuid-Holland                    | 20.6 | 41.5        | 40.3        | 35.8        | 12.6 | 29.3        | 28.8        | 24.7        |
| NL34        | Zeeland                         | 26.0 | 38.1        | 44.5        | 40.6        | 16.5 | 29.8        | 33.2        | 29.5        |
| NL41        | Noord-Brabant                   | 20.6 | 39.9        | 43.9        | 40.1        | 11.0 | 28.7        | 31.7        | 28.2        |
| NL42        | Limburg (NL)                    | 23.6 | 41.2        | 48.6        | 44.0        | 13.4 | 31.2        | 37.1        | 32.7        |
| Norway      |                                 |      |             |             |             |      |             |             |             |
| NO01        | Oslo og Akershus                | 19.0 | 43.4        | 34.2        | 30.9        | 12.3 | 30.1        | 22.3        | 19.5        |
| NO02        | Hedmark og Oppland              | 28.2 | 38.3        | 44.3        | 40.4        | 19.4 | 27.3        | 31.7        | 28.1        |
| NO03        | Sør-Østlandet                   | 24.3 | 38.3        | 42.4        | 38.7        | 16.3 | 27.4        | 29.7        | 26.4        |
| NO04        | Agder og Rogaland               | 20.4 | 35.3        | 39.2        | 35.9        | 13.4 | 23.9        | 26.7        | 23.8        |
| NO05        | Vestlandet                      | 23.5 | 36.6        | 43.0        | 39.3        | 15.8 | 24.9        | 30.3        | 27.0        |
| NO06        | Trøndelag                       | 22.8 | 37.0        | 40.7        | 37.4        | 15.6 | 25.6        | 28.3        | 25.3        |
| NO07        | Nord-Norge                      | 22.9 | 36.0        | 44.9        | 40.2        | 14.8 | 25.1        | 32.5        | 28.1        |
| Poland      |                                 |      |             |             |             |      |             |             |             |
| PL11        | Łódzkie                         | 21.2 | 44.7        | 46.4        | 45.5        | 12.3 | 24.6        | 26.2        | 25.6        |
| PL12        | Mazowieckie                     | 20.8 | 46.9        | 42.7        | 41.2        | 13.7 | 31.4        | 27.5        | 26.3        |
| PL21        | Malopolskie                     | 19.2 | 43.7        | 42.9        | 40.8        | 11.8 | 28.1        | 27.7        | 26.2        |
| PL22        | Slaskie                         | 17.9 | 48.2        | 64.8        | 63.1        | 11.1 | 33.6        | 53.9        | 53.5        |
| PL31        | Lubelskie                       | 20.7 | 39.7        | 43.2        | 42.3        | 12.4 | 22.4        | 25.6        | 25.0        |
| PL32        | Podkarpackie                    | 18.6 | 40.7        | 43.8        | 42.2        | 12.2 | 27.8        | 31.4        | 30.1        |
| PL33        | Swietokrzyskie                  | 21.5 | 43.1        | 47.6        | 46.5        | 13.2 | 25.8        | 30.1        | 29.3        |
| PL34        | Podlaskie                       | 21.0 | 43.1        | 48.0        | 46.2        | 14.7 | 31.4        | 37.2        | 35.6        |
| PL41        | Wielkopolskie                   | 16.7 | 42.0        | 42.5        | 41.7        | 10.7 | 26.1        | 26.6        | 26.2        |
| PL42        | Zachodniopomorskie              | 16.7 | 43.9        | 45.9        | 44.5        | 11.1 | 30.0        | 32.7        | 31.7        |
| PL43        | Lubuskie                        | 16.2 | 42.2        | 44.1        | 41.9        | 9.5  | 24.4        | 26.6        | 25.2        |
| PL51        | Dolnoslaskie                    | 18.7 | 48.5        | 50.3        | 48.1        | 12.4 | 31.4        | 34.4        | 33.0        |
| PL52        | Opolskie                        | 18.7 | 50.6        | 73.8        | 58.6        | 12.4 | 40.8        | 76.6        | 58.5        |
| PL61        | Kujawsko-Pomorskie              | 17.3 | 41.9        | 44.6        | 44.1        | 10.7 | 26.3        | 29.2        | 28.9        |
| PL62        | Warminsko-Mazurskie             | 16.2 | 38.9        | 46.0        | 44.8        | 10.6 | 26.9        | 35.3        | 34.4        |
| PL63        | Pomorskie                       | 16.7 | 42.0        | 45.2        | 43.9        | 11.8 | 32.0        | 36.4        | 35.6        |
| Portugal    |                                 |      |             |             |             |      |             |             |             |
| PT11        | Norte                           | 21.5 | 53.5        | 57.7        | 56.8        | 11.9 | 32.6        | 36.0        | 35.7        |
| PT15        | Algarve                         | 28.1 | 47.9        | 44.9        | 36.1        | 16.6 | 31.3        | 28.4        | 21.7        |
| PT16        | Centro (PT)                     | 30.5 | 56.3        | 58.8        | 54.7        | 16.0 | 30.5        | 32.5        | 30.2        |
| PT17        | Lisboa                          | 23.9 | 51.3        | 47.5        | 39.8        | 13.2 | 33.1        | 30.6        | 24.9        |
| PT18        | Alentejo                        | 35.9 | 53.6        | 55.9        | 51.8        | 21.1 | 32.0        | 34.2        | 31.7        |
| PT20        | Região Autónoma dos Açores (PT) | 18.5 | 34.7        | 38.6        | 37.3        | 11.8 | 19.8        | 23.1        | 22.2        |
| PT30        | Região Autónoma da Madeira (PT) | 19.3 | 38.5        | 40.7        | 36.1        | 11.0 | 21.9        | 23.7        | 20.6        |
| Romania     |                                 |      |             |             |             |      |             |             |             |
| RO11        | Nord-Vest                       | 19.2 | 36.6        | 40.8        | 40.2        | 11.3 | 21.2        | 26.5        | 27.0        |
| RO12        | Centru                          | 19.3 | 40.1        | 46.6        | 46.1        | 12.2 | 25.0        | 33.5        | 34.3        |
| RO21        | Nord-Est                        | 21.2 | 33.6        | 40.2        | 39.6        | 10.9 | 18.5        | 24.8        | 25.0        |
| RO22        | Sud-Est                         | 20.4 | 41.1        | 44.9        | 44.1        | 11.6 | 25.9        | 30.2        | 30.0        |
| RO31        | Sud - Muntenia                  | 24.2 | 39.7        | 44.6        | 43.8        | 13.1 | 23.4        | 27.1        | 26.7        |
| RO32        | Bucuresti - Ilfov               | 19.8 | 57.8        | 42.1        | 34.2        | 12.6 | 34.7        | 27.0        | 21.6        |
| RO41        | Sud-Vest Oltenia                | 23.8 | 40.2        | 44.9        | 44.4        | 12.1 | 22.0        | 26.0        | 25.9        |
| RO42        | Vest                            | 20.3 | 39.2        | 41.2        | 39.8        | 12.0 | 24.1        | 27.7        | 27.3        |

**Table 3. continued**

|                |  | ODR  |             |             |             | VODR |             |             |             |
|----------------|--|------|-------------|-------------|-------------|------|-------------|-------------|-------------|
|                |  | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| Sweden         |  |      |             |             |             |      |             |             |             |
| SE11           | Stockholm  | 20.8 | 42.8        | 34.0        | 30.3        | 13.3 | 30.2        | 22.5        | 19.2        |
| SE12           | Östra Mellansverige                              | 26.7 | 40.1        | 42.0        | 37.6        | 17.7 | 27.1        | 29.2        | 25.2        |
| SE21           | Småland med öarna                                | 30.0 | 37.6        | 43.2        | 38.6        | 19.1 | 24.6        | 28.4        | 24.4        |
| SE22           | Sydsverige                                       | 27.5 | 42.1        | 40.4        | 35.6        | 18.2 | 28.8        | 27.4        | 23.2        |
| SE23           | Västsverige                                      | 26.4 | 40.9        | 41.6        | 37.2        | 17.1 | 27.7        | 28.1        | 24.2        |
| SE31           | Norra Mellansverige                              | 31.3 | 36.8        | 44.2        | 39.4        | 20.7 | 25.6        | 30.6        | 26.2        |
| SE32           | Mellersta Norrland                               | 31.8 | 35.8        | 42.9        | 38.4        | 20.7 | 24.5        | 28.9        | 24.9        |
| SE33           | Övre Norrland                                    | 28.1 | 40.3        | 45.9        | 40.6        | 17.5 | 25.6        | 31.9        | 27.2        |
| Slovenia       |  |      |             |             |             |      |             |             |             |
| SI01           | Vzhodna Slovenija                                | 21.4 | 52.4        | 52.8        | 49.5        | 12.2 | 35.5        | 36.1        | 33.0        |
| SI02           | Zahodna Slovenija                                | 22.3 | 56.0        | 52.5        | 48.6        | 12.7 | 40.4        | 37.0        | 33.3        |
| Slovakia       |  |      |             |             |             |      |             |             |             |
| SK01           | Bratislavský kraj                                | 16.3 | 54.5        | 46.1        | 39.5        | 9.8  | 30.0        | 28.6        | 24.3        |
| SK02           | Západné Slovensko                                | 17.1 | 48.3        | 46.7        | 41.9        | 10.3 | 28.0        | 28.2        | 25.0        |
| SK03           | Stredné Slovensko                                | 16.4 | 40.4        | 42.1        | 39.3        | 10.0 | 23.5        | 26.2        | 24.3        |
| SK04           | Východné Slovensko                               | 15.2 | 34.2        | 35.5        | 34.0        | 9.2  | 19.9        | 21.5        | 20.5        |
| United Kingdom |  |      |             |             |             |      |             |             |             |
| UKC1           | Tees Valley and Durham                           | 25.4 | 33.5        | 37.1        | 32.4        | 16.3 | 24.8        | 27.0        | 22.8        |
| UKC2           | Northumberland, Tyne and Wear                    | 26.1 | 39.1        | 39.9        | 33.7        | 17.2 | 27.3        | 28.8        | 23.5        |
| UKD1           | Cumbria  | 29.2 | 37.5        | 39.7        | 34.7        | 16.9 | 27.2        | 26.3        | 22.3        |
| UKD2           | Cheshire   | 25.0 | 36.6        | 38.8        | 33.6        | 15.2 | 27.5        | 27.4        | 22.9        |
| UKD3           | Greater Manchester                               | 22.2 | 34.7        | 35.2        | 29.1        | 14.4 | 23.4        | 24.4        | 19.3        |
| UKD4           | Lancashire                                       | 25.7 | 33.6        | 35.8        | 31.1        | 16.4 | 23.9        | 24.8        | 20.9        |
| UKD5           | Merseyside                                       | 26.0 | 35.2        | 37.9        | 32.5        | 16.9 | 24.6        | 27.5        | 22.9        |
| UKE1           | East Yorkshire and Northern Lincolnshire         | 26.2 | 36.0        | 36.7        | 30.7        | 16.5 | 26.2        | 25.7        | 20.5        |
| UKE2           | North Yorkshire                                  | 27.9 | 42.0        | 41.6        | 34.0        | 17.2 | 30.1        | 28.3        | 22.0        |
| UKE3           | South Yorkshire                                  | 24.7 | 37.4        | 39.3        | 32.6        | 16.1 | 26.0        | 27.8        | 22.0        |
| UKE4           | West Yorkshire                                   | 22.5 | 36.7        | 37.3        | 30.0        | 14.3 | 23.9        | 25.1        | 19.1        |
| UKF1           | Derbyshire and Nottinghamshire                   | 24.6 | 40.5        | 41.4        | 34.2        | 15.9 | 28.5        | 29.2        | 23.0        |
| UKF2           | Leicestershire, Rutland and Northants            | 22.3 | 37.5        | 41.1        | 33.2        | 13.7 | 25.8        | 27.7        | 21.2        |
| UKF3           | Lincolnshire                                     | 30.3 | 37.8        | 36.6        | 31.4        | 18.0 | 27.2        | 23.9        | 19.7        |
| UKG1           | Herefordshire, Worcestershire and Warks          | 26.8 | 38.2        | 40.5        | 34.7        | 16.0 | 28.0        | 27.5        | 22.7        |
| UKG2           | Shropshire and Staffordshire                     | 25.1 | 36.0        | 38.8        | 34.0        | 15.2 | 26.1        | 26.9        | 22.8        |
| UKG3           | West Midlands                                    | 24.0 | 33.3        | 35.7        | 29.1        | 15.8 | 22.6        | 25.4        | 19.7        |
| UKH1           | East Anglia                                      | 27.9 | 41.5        | 43.5        | 35.2        | 17.2 | 29.2        | 29.6        | 22.7        |
| UKH2           | Bedfordshire, Hertfordshire                      | 22.3 | 38.1        | 39.8        | 31.8        | 13.2 | 27.0        | 26.8        | 20.3        |
| UKH3           | Essex  | 26.1 | 38.3        | 40.3        | 32.8        | 16.1 | 27.3        | 27.1        | 21.0        |
| UKI1           | Inner London                                     | 13.3 | 52.9        | 33.5        | 22.2        | 9.1  | 38.1        | 26.1        | 16.1        |
| UKI2           | Outer London                                     | 19.8 | 42.1        | 38.5        | 27.8        | 12.7 | 30.1        | 27.1        | 18.2        |
| UKJ1           | Berkshire, Bucks and Oxfordshire                 | 20.3 | 41.7        | 42.6        | 33.4        | 11.8 | 28.3        | 28.3        | 21.0        |
| UKJ2           | Surrey, East and West Sussex                     | 29.2 | 41.7        | 45.9        | 36.6        | 19.0 | 31.0        | 32.0        | 24.3        |
| UKJ3           | Hampshire and Isle of Wight                      | 25.2 | 43.2        | 42.0        | 34.3        | 15.7 | 29.0        | 28.4        | 22.2        |
| UKJ4           | Kent   | 25.7 | 35.9        | 41.3        | 33.8        | 16.0 | 25.9        | 28.2        | 21.9        |
| UKK1           | Gloucestershire, Wiltshire and Bristol/Bath area | 24.8 | 42.5        | 41.7        | 34.0        | 15.4 | 29.1        | 27.9        | 21.8        |
| UKK2           | Dorset and Somerset                              | 34.2 | 39.2        | 41.8        | 35.4        | 22.4 | 29.7        | 28.7        | 23.4        |
| UKK3           | Cornwall and Isles of Scilly                     | 32.0 | 39.1        | 36.8        | 31.9        | 20.7 | 29.9        | 25.6        | 21.4        |
| UKK4           | Devon  | 31.6 | 40.9        | 39.2        | 32.8        | 21.1 | 29.6        | 27.2        | 21.9        |
| UKL1           | West Wales and The Valleys                       | 28.6 | 34.3        | 36.1        | 32.2        | 19.6 | 25.5        | 26.2        | 22.8        |
| UKL2           | East Wales                                       | 25.0 | 38.3        | 38.1        | 32.7        | 15.9 | 25.9        | 26.2        | 21.7        |
| UKM2           | Eastern Scotland                                 | 24.5 | 41.8        | 39.4        | 32.1        | 14.5 | 27.4        | 25.6        | 20.0        |
| UKM3           | South Western Scotland                           | 24.3 | 36.6        | 37.7        | 31.8        | 15.6 | 26.0        | 27.1        | 22.0        |
| UKM5           | North Eastern Scotland                           | 22.9 | 39.7        | 39.2        | 30.7        | 13.2 | 25.1        | 24.5        | 18.2        |
| UKM6           | Highlands and Islands                            | 27.8 | 38.7        | 50.1        | 41.7        | 12.7 | 24.1        | 28.7        | 23.1        |
| UKN0           | Northern Ireland                                 | 20.9 | 33.5        | 35.6        | 30.1        | 13.9 | 24.5        | 25.9        | 21.0        |

**Table 4. Dependency ratios EODR and LMDR according to three reference scenarios**

|      |                       | EODR |             |             |             | LMDR  |             |             |             |
|------|-----------------------|------|-------------|-------------|-------------|-------|-------------|-------------|-------------|
|      |                       | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005  | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| AT11 | Austria               |      |             |             |             |       |             |             |             |
| AT11 | Burgenland (A)        | 38.7 | 61.2        | 73.2        | 78.6        | 79.8  | 108.9       | 122.6       | 129.5       |
| AT12 | Niederösterreich      | 33.9 | 57.1        | 68.3        | 66.3        | 72.8  | 100.6       | 113.5       | 111.2       |
| AT13 | Wien                  | 31.2 | 48.2        | 61.8        | 83.0        | 76.7  | 96.1        | 111.8       | 132.4       |
| AT21 | Kärnten               | 36.1 | 71.4        | 84.9        | 77.3        | 81.5  | 122.9       | 138.3       | 130.4       |
| AT22 | Steiermark            | 35.1 | 63.2        | 76.0        | 80.6        | 77.9  | 111.5       | 126.2       | 131.4       |
| AT31 | Oberösterreich        | 30.9 | 58.9        | 71.5        | 66.2        | 69.2  | 103.2       | 117.7       | 111.8       |
| AT32 | Salzburg              | 27.1 | 54.9        | 69.0        | 70.4        | 63.0  | 95.2        | 111.3       | 112.3       |
| AT33 | Tirol                 | 27.6 | 55.5        | 70.6        | 74.4        | 65.7  | 98.5        | 115.8       | 119.6       |
| AT34 | Vorarlberg            | 25.5 | 51.8        | 64.7        | 64.3        | 61.0  | 92.8        | 107.4       | 106.1       |
| BE10 | Belgium               |      |             |             |             |       |             |             |             |
| BE10 | Brussels              |      |             |             |             |       |             |             |             |
| BE10 | Hoofdstedelijk Gewest | 35.0 | 49.2        | 57.8        | 60.5        | 88.5  | 108.1       | 118.1       | 120.9       |
| BE21 | Prov. Antwerpen       | 39.1 | 59.2        | 65.4        | 64.8        | 88.4  | 113.2       | 120.4       | 119.9       |
| BE22 | Prov. Limburg (B)     | 34.1 | 67.9        | 75.5        | 76.9        | 87.7  | 127.7       | 136.4       | 138.3       |
| BE23 | Prov. Oost-Vlaanderen | 38.3 | 59.2        | 63.5        | 66.6        | 82.0  | 108.4       | 113.4       | 117.0       |
| BE24 | Prov. Vlaams Brabant  | 36.5 | 59.8        | 66.4        | 63.7        | 77.6  | 107.0       | 114.3       | 111.2       |
| BE25 | Prov. West-Vlaanderen | 43.0 | 62.8        | 66.7        | 66.9        | 88.1  | 111.9       | 116.6       | 116.7       |
| BE31 | Prov. Brabant Wallon  | 34.6 | 60.6        | 66.9        | 56.9        | 86.8  | 117.6       | 124.6       | 113.6       |
| BE32 | Prov. Hainaut         | 41.9 | 58.4        | 63.1        | 59.5        | 106.3 | 127.4       | 133.1       | 129.5       |
| BE33 | Prov. Liège           | 40.9 | 56.9        | 61.5        | 59.9        | 97.9  | 118.1       | 123.7       | 122.4       |
| BE34 | Prov. Luxembourg (B)  | 37.3 | 51.8        | 55.2        | 53.6        | 89.2  | 108.6       | 112.9       | 111.8       |
| BE35 | Prov. Namur           | 38.0 | 53.9        | 57.5        | 55.4        | 92.5  | 113.0       | 117.5       | 115.6       |
| BG31 | Bulgaria              |      |             |             |             |       |             |             |             |
| BG31 | Severozapaden         | 55.7 | 71.0        | 72.9        | 58.9        | 131.8 | 148.8       | 151.7       | 137.4       |
| BG32 | Severen tsentralen    | 41.5 | 71.2        | 73.5        | 69.1        | 109.2 | 138.6       | 141.9       | 138.1       |
| BG33 | Severoiztochen        | 33.8 | 66.3        | 68.1        | 62.0        | 94.0  | 127.8       | 130.4       | 124.2       |
| BG34 | Yugoiztochen          | 39.4 | 66.6        | 68.3        | 57.6        | 105.2 | 135.1       | 137.7       | 126.1       |
| BG41 | Yugozapaden           | 33.8 | 68.4        | 70.7        | 76.6        | 85.8  | 122.3       | 125.4       | 131.3       |
| BG42 | Yuzhen tsentralen     | 38.9 | 71.8        | 73.9        | 69.7        | 105.6 | 140.7       | 143.8       | 139.8       |
| CH01 | Switzerland           |      |             |             |             |       |             |             |             |
| CH01 | Région lémanique      | 26.2 | 47.7        | 60.9        | 62.5        | 55.4  | 77.1        | 90.4        | 92.4        |
| CH02 | Espace Mittelland     | 27.5 | 52.2        | 62.0        | 58.2        | 49.5  | 74.9        | 85.0        | 81.4        |
| CH03 | Nordwestschweiz       | 26.2 | 51.3        | 61.0        | 63.9        | 50.1  | 75.9        | 85.7        | 88.8        |
| CH04 | Zürich                | 24.5 | 47.3        | 57.7        | 65.3        | 44.8  | 68.6        | 79.2        | 86.8        |
| CH05 | Ostschweiz            | 25.1 | 51.8        | 62.4        | 56.4        | 46.3  | 73.5        | 84.4        | 78.9        |
| CH06 | Zentralschweiz        | 23.1 | 49.0        | 57.8        | 57.0        | 43.8  | 70.7        | 79.7        | 79.2        |
| CH07 | Ticino                | 34.9 | 59.7        | 72.4        | 83.9        | 72.8  | 97.5        | 110.3       | 122.1       |
| CY00 | Cyprus                | 21.0 | 49.8        | 54.4        | 52.9        | 60.4  | 82.5        | 90.1        | 91.4        |
| CZ01 | Czech Republic        |      |             |             |             |       |             |             |             |
| CZ01 | Praha                 | 28.1 | 45.9        | 59.5        | 74.9        | 62.6  | 79.5        | 94.2        | 109.9       |
| CZ02 | Strední Cechy         | 27.0 | 53.7        | 61.4        | 62.3        | 68.5  | 99.1        | 105.8       | 105.3       |
| CZ03 | Jihozápad             | 26.9 | 58.0        | 65.4        | 65.3        | 67.6  | 99.4        | 107.7       | 107.6       |
| CZ04 | Severozápad           | 23.2 | 48.6        | 59.0        | 56.3        | 64.1  | 89.7        | 101.7       | 98.4        |
| CZ05 | Severovýchod          | 27.4 | 61.6        | 67.4        | 65.0        | 70.8  | 106.2       | 112.1       | 109.5       |
| CZ06 | Jihovýchod            | 28.2 | 61.1        | 70.0        | 68.4        | 71.8  | 104.8       | 115.2       | 113.3       |
| CZ07 | Střední Morava        | 27.8 | 67.5        | 72.1        | 69.7        | 73.2  | 114.5       | 119.3       | 116.6       |
| CZ08 | Moravskoslezsko       | 25.4 | 61.6        | 67.0        | 63.2        | 72.5  | 109.1       | 115.6       | 111.6       |
| DE11 | Germany               |      |             |             |             |       |             |             |             |
| DE11 | Stuttgart             | 33.4 | 63.5        | 71.3        | 70.8        | 65.8  | 98.7        | 107.4       | 106.2       |
| DE12 | Karlsruhe             | 35.4 | 66.0        | 74.9        | 76.2        | 71.6  | 105.5       | 115.3       | 115.8       |
| DE13 | Freiburg              | 34.4 | 64.5        | 72.4        | 69.4        | 66.5  | 99.7        | 108.3       | 104.7       |
| DE14 | Tübingen              | 32.8 | 65.4        | 73.6        | 67.7        | 66.6  | 102.1       | 111.1       | 104.8       |
| DE21 | Oberbayern            | 32.1 | 56.0        | 62.2        | 75.0        | 64.5  | 91.4        | 98.3        | 109.7       |
| DE22 | Niederbayern          | 33.4 | 61.5        | 68.1        | 64.3        | 63.7  | 95.0        | 102.4       | 98.5        |
| DE23 | Oberpfalz             | 34.1 | 62.8        | 68.8        | 65.6        | 66.2  | 98.5        | 105.3       | 101.9       |
| DE24 | Oberfranken           | 38.4 | 69.0        | 75.4        | 67.5        | 71.6  | 105.5       | 112.6       | 104.3       |
| DE25 | Mittelfranken         | 35.9 | 63.0        | 70.2        | 71.7        | 71.1  | 101.0       | 109.0       | 110.0       |
| DE26 | Unterfranken          | 35.9 | 69.1        | 76.2        | 69.4        | 70.5  | 106.6       | 114.7       | 107.9       |
| DE27 | Schwaben              | 34.6 | 62.1        | 68.1        | 63.0        | 66.9  | 96.7        | 103.2       | 97.9        |



Table 4. continued

|      |                        | EODR |             |             |             | LMDR  |             |             |             |
|------|------------------------|------|-------------|-------------|-------------|-------|-------------|-------------|-------------|
|      |                        | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005  | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| DE30 | Berlin                 | 31.0 | 59.9        | 68.3        | 93.4        | 69.3  | 99.4        | 108.9       | 134.4       |
| DE41 | Brandenburg - Nordost  | 34.1 | 73.2        | 81.5        | 75.4        | 68.4  | 109.0       | 118.5       | 115.3       |
|      | Brandenburg -          |      |             |             |             |       |             |             |             |
| DE42 | Südwest                | 34.3 | 73.2        | 80.5        | 77.4        | 66.7  | 107.3       | 115.5       | 114.3       |
| DE50 | Bremen                 | 41.8 | 62.1        | 68.8        | 86.1        | 86.9  | 108.7       | 116.2       | 133.1       |
| DE60 | Hamburg                | 34.3 | 53.4        | 58.6        | 90.8        | 71.3  | 92.9        | 99.0        | 130.1       |
| DE71 | Darmstadt              | 34.4 | 61.2        | 69.5        | 77.5        | 72.1  | 102.0       | 111.4       | 118.2       |
| DE72 | Gießen                 | 36.6 | 69.3        | 77.1        | 73.2        | 75.0  | 111.1       | 119.6       | 115.5       |
| DE73 | Kassel                 | 41.6 | 72.4        | 80.8        | 70.3        | 81.6  | 115.0       | 124.4       | 113.5       |
|      | Mecklenburg-           |      |             |             |             |       |             |             |             |
| DE80 | Vorpommern             | 34.4 | 75.2        | 82.2        | 75.6        | 68.8  | 111.8       | 119.8       | 115.3       |
| DE91 | Braunschweig           | 42.6 | 59.6        | 74.1        | 76.5        | 87.2  | 106.4       | 122.2       | 124.1       |
| DE92 | Hannover               | 40.6 | 66.3        | 73.7        | 73.5        | 80.2  | 108.6       | 116.8       | 115.7       |
| DE93 | Lüneburg               | 38.5 | 64.5        | 70.1        | 62.6        | 79.3  | 107.9       | 114.3       | 105.9       |
| DE94 | Weser-Ems              | 36.2 | 62.7        | 69.7        | 62.1        | 77.0  | 106.3       | 114.3       | 105.9       |
| DEA1 | Düsseldorf             | 41.1 | 62.6        | 68.3        | 71.0        | 84.6  | 108.6       | 115.1       | 117.4       |
| DEA2 | Köln                   | 37.5 | 65.8        | 72.5        | 77.4        | 84.1  | 115.7       | 123.1       | 127.4       |
| DEA3 | Münster                | 38.1 | 66.5        | 72.2        | 67.1        | 83.1  | 114.5       | 121.0       | 115.7       |
| DEA4 | Detmold                | 38.2 | 65.0        | 70.6        | 62.9        | 74.7  | 104.1       | 110.4       | 102.2       |
| DEA5 | Arnsberg               | 41.1 | 65.3        | 72.1        | 69.6        | 85.7  | 112.3       | 120.0       | 117.5       |
| DEB1 | Koblenz                | 40.3 | 64.4        | 70.0        | 64.4        | 78.0  | 104.7       | 110.9       | 105.5       |
| DEB2 | Trier                  | 39.6 | 61.7        | 67.8        | 69.3        | 76.4  | 102.2       | 109.1       | 110.1       |
| DEB3 | Rheinhausen-Pfalz      | 38.2 | 66.1        | 73.0        | 73.5        | 79.8  | 110.9       | 118.6       | 119.0       |
| DEC0 | Saarland               | 44.3 | 75.1        | 83.7        | 77.1        | 92.1  | 125.9       | 135.3       | 129.1       |
| DED1 | Chemnitz               | 42.6 | 86.1        | 94.3        | 75.7        | 74.8  | 120.0       | 129.2       | 111.0       |
| DED2 | Dresden                | 39.8 | 74.9        | 82.7        | 79.3        | 73.6  | 109.5       | 118.3       | 115.6       |
| DED3 | Leipzig                | 38.0 | 72.8        | 80.4        | 86.0        | 72.1  | 108.3       | 117.0       | 123.4       |
| DEE0 | Sachsen-Anhalt         | 39.9 | 81.3        | 91.1        | 80.0        | 78.1  | 120.2       | 131.4       | 122.5       |
| DEF0 | Schleswig-Holstein     | 38.3 | 71.8        | 79.1        | 66.9        | 75.1  | 110.9       | 119.0       | 105.8       |
| DEG0 | Thüringen              | 36.9 | 86.0        | 94.5        | 80.9        | 72.2  | 123.6       | 133.1       | 120.7       |
|      | Denmark                |      |             |             |             |       |             |             |             |
| DK01 | Hovedstaden            | 24.8 | 38.2        | 40.9        | 48.0        | 48.8  | 63.4        | 66.0        | 72.6        |
| DK02 | Sjælland               | 27.8 | 45.4        | 47.8        | 35.3        | 53.2  | 71.7        | 74.2        | 61.5        |
| DK03 | Syddanmark             | 28.1 | 45.8        | 48.7        | 38.8        | 53.3  | 72.0        | 75.0        | 64.9        |
| DK04 | Midtjylland            | 24.7 | 42.6        | 45.3        | 41.0        | 49.3  | 68.6        | 71.4        | 66.6        |
| DK05 | Nordjylland            | 28.7 | 44.0        | 46.9        | 38.9        | 54.0  | 70.0        | 73.0        | 65.0        |
| EE00 | Estonia                | 30.0 | 47.2        | 47.4        | 43.8        | 70.6  | 85.7        | 86.0        | 82.2        |
|      | Spain                  |      |             |             |             |       |             |             |             |
| ES11 | Galicia                | 45.1 | 95.3        | 114.7       | 121.9       | 91.3  | 146.1       | 166.2       | 173.5       |
| ES12 | Principado de Asturias | 51.4 | 109.0       | 129.9       | 149.3       | 114.8 | 177.3       | 198.8       | 219.1       |
| ES13 | Cantabria              | 39.8 | 88.6        | 104.6       | 114.6       | 88.9  | 142.4       | 158.8       | 169.3       |
| ES21 | Pais Vasco             | 37.0 | 90.1        | 103.8       | 110.5       | 79.8  | 138.5       | 152.3       | 158.0       |
|      | Comunidad Foral de     |      |             |             |             |       |             |             |             |
| ES22 | Navarra                | 35.7 | 77.2        | 93.6        | 96.4        | 75.7  | 123.3       | 140.1       | 142.1       |
| ES23 | La Rioja               | 37.9 | 78.2        | 99.0        | 101.7       | 78.7  | 126.1       | 147.4       | 148.6       |
| ES24 | Aragón                 | 43.3 | 75.5        | 94.4        | 100.9       | 84.4  | 121.9       | 141.8       | 147.6       |
| ES30 | Comunidad de Madrid    | 27.9 | 61.8        | 79.7        | 93.6        | 66.1  | 105.1       | 123.6       | 136.7       |
| ES41 | Castilla y León        | 50.0 | 92.7        | 112.3       | 122.9       | 98.9  | 146.2       | 166.4       | 178.1       |
| ES42 | Castilla-la Mancha     | 42.6 | 73.6        | 89.5        | 94.3        | 92.8  | 129.0       | 145.4       | 151.3       |
| ES43 | Extremadura            | 44.0 | 79.1        | 91.6        | 90.5        | 99.8  | 139.9       | 153.1       | 152.5       |
| ES51 | Cataluña               | 32.3 | 62.4        | 80.3        | 86.1        | 66.7  | 102.4       | 120.9       | 125.6       |
|      | Comunidad              |      |             |             |             |       |             |             |             |
| ES52 | Valenciana             | 32.0 | 61.1        | 77.5        | 88.9        | 73.8  | 108.3       | 125.3       | 136.2       |
| ES53 | Illes Balears          | 26.2 | 64.0        | 81.8        | 88.2        | 61.9  | 105.9       | 124.4       | 130.6       |
| ES61 | Andalucía              | 32.6 | 69.0        | 81.4        | 82.0        | 89.0  | 130.3       | 143.7       | 143.6       |
| ES62 | Región de Murcia       | 29.2 | 62.7        | 78.1        | 79.4        | 75.5  | 115.8       | 132.4       | 132.2       |
|      | Ciudad Autónoma de     |      |             |             |             |       |             |             |             |
| ES63 | Ceuta (ES)             | 27.9 | 65.3        | 74.0        | 64.9        | 91.7  | 137.6       | 147.4       | 134.5       |
|      | Ciudad Autónoma de     |      |             |             |             |       |             |             |             |
| ES64 | Melilla (ES)           | 27.3 | 72.5        | 87.1        | 62.1        | 93.0  | 147.5       | 161.8       | 133.5       |
| ES70 | Canarias (ES)          | 24.2 | 71.3        | 90.9        | 100.9       | 72.2  | 126.2       | 146.8       | 157.2       |
|      | Finland                |      |             |             |             |       |             |             |             |
| FI13 | Itä-Suomi              | 40.1 | 58.1        | 61.2        | 49.3        | 84.2  | 103.8       | 107.2       | 95.4        |
| FI18 | Etelä-Suomi            | 27.2 | 45.2        | 47.7        | 53.8        | 57.8  | 77.8        | 80.5        | 86.6        |
| FI19 | Länsi-Suomi            | 34.9 | 52.0        | 54.6        | 51.2        | 71.9  | 90.7        | 93.5        | 89.7        |
| FI1A | Pohjois-Suomi          | 30.2 | 50.3        | 52.7        | 41.9        | 70.1  | 92.4        | 95.0        | 83.6        |
| FI20 | Åland                  | 30.7 | 47.8        | 52.8        | 49.4        | 56.6  | 75.0        | 80.3        | 77.4        |

Table 4. continued

|      |                                     | EODR |             |             |             | LMDR  |             |             |             |
|------|-------------------------------------|------|-------------|-------------|-------------|-------|-------------|-------------|-------------|
|      |                                     | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005  | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
|      | France                              |      |             |             |             |       |             |             |             |
| FR10 | Île de France                       | 25.2 | 47.1        | 49.5        | 61.0        | 67.7  | 93.6        | 96.3        | 108.5       |
| FR21 | Champagne-Ardenne                   | 35.8 | 63.0        | 67.1        | 54.7        | 78.2  | 110.0       | 114.6       | 101.3       |
| FR22 | Picardie                            | 33.0 | 58.4        | 61.6        | 50.8        | 81.0  | 111.1       | 114.9       | 103.3       |
| FR23 | Haute-Normandie                     | 33.2 | 55.2        | 58.2        | 51.0        | 75.7  | 101.2       | 104.8       | 97.1        |
| FR24 | Centre                              | 40.2 | 60.4        | 64.1        | 55.1        | 80.9  | 104.9       | 109.2       | 99.6        |
| FR25 | Basse-Normandie                     | 42.6 | 62.3        | 66.1        | 55.2        | 89.9  | 113.6       | 118.0       | 106.2       |
| FR26 | Bourgogne                           | 43.9 | 62.7        | 66.7        | 57.2        | 86.9  | 109.2       | 113.8       | 103.6       |
| FR30 | Nord - Pas-de-Calais                | 32.8 | 53.0        | 55.5        | 47.6        | 81.9  | 105.9       | 109.1       | 100.0       |
| FR41 | Lorraine                            | 36.4 | 61.7        | 65.6        | 59.0        | 85.4  | 115.5       | 120.0       | 113.0       |
| FR42 | Alsace                              | 29.9 | 58.9        | 62.6        | 59.2        | 69.3  | 103.4       | 107.7       | 104.0       |
| FR43 | Franche-Comté                       | 37.1 | 61.5        | 65.3        | 56.5        | 84.5  | 113.2       | 117.5       | 107.8       |
| FR51 | Pays de la Loire                    | 36.9 | 56.4        | 59.6        | 53.4        | 77.9  | 101.7       | 105.5       | 98.4        |
| FR52 | Bretagne                            | 42.8 | 58.8        | 62.2        | 56.0        | 90.5  | 110.8       | 114.7       | 107.8       |
| FR53 | Poitou-Charentes                    | 46.1 | 61.3        | 65.1        | 61.4        | 89.7  | 108.1       | 112.6       | 108.6       |
| FR61 | Aquitaine                           | 44.6 | 62.6        | 66.5        | 68.1        | 94.4  | 115.7       | 120.3       | 122.1       |
| FR62 | Midi-Pyrénées                       | 42.2 | 59.4        | 63.1        | 67.3        | 85.9  | 106.6       | 110.9       | 115.5       |
| FR63 | Limousin                            | 50.8 | 60.5        | 64.6        | 64.8        | 88.6  | 101.1       | 105.8       | 106.3       |
| FR71 | Rhône-Alpes                         | 33.2 | 55.4        | 58.5        | 57.2        | 76.0  | 101.6       | 105.2       | 103.8       |
| FR72 | Auvergne                            | 44.7 | 61.6        | 65.7        | 62.5        | 88.4  | 108.8       | 113.4       | 110.1       |
| FR81 | Languedoc-Roussillon                | 47.0 | 60.2        | 63.6        | 64.3        | 104.0 | 118.5       | 122.5       | 123.2       |
| FR82 | Provence-Alpes-Côte<br>d'Azur       | 44.6 | 59.2        | 62.6        | 62.4        | 97.6  | 113.6       | 117.5       | 117.6       |
| FR83 | Corse                               | 66.4 | 95.2        | 101.7       | 114.2       | 189.3 | 219.5       | 227.1       | 242.9       |
| FR91 | Guadeloupe (FR)                     | 30.0 | 45.2        | 46.2        | 44.2        | 94.0  | 113.2       | 114.7       | 112.4       |
| FR92 | Martinique (FR)                     | 33.5 | 62.2        | 64.9        | 62.8        | 101.9 | 134.4       | 138.0       | 135.9       |
| FR93 | Guyane (FR)                         | 14.1 | 35.1        | 34.5        | 32.4        | 130.4 | 158.8       | 158.7       | 156.3       |
| FR94 | Reunion (FR)                        | 19.4 | 42.1        | 42.8        | 41.0        | 88.6  | 114.6       | 115.8       | 113.8       |
|      | Greece                              |      |             |             |             |       |             |             |             |
| GR11 | Anatoliki Makedonia,<br>Thraki      | 44.1 | 68.5        | 76.4        | 74.8        | 97.8  | 124.5       | 133.6       | 131.4       |
| GR12 | Kentriki Makedonia                  | 39.8 | 85.2        | 96.4        | 87.6        | 98.4  | 147.4       | 159.9       | 150.0       |
| GR13 | Dytiki Makedonia                    | 47.3 | 74.7        | 83.6        | 84.8        | 108.2 | 135.6       | 145.4       | 150.5       |
| GR14 | Thessalia                           | 43.6 | 78.0        | 88.3        | 73.6        | 93.5  | 128.7       | 140.3       | 125.9       |
| GR21 | Ipeiros                             | 51.4 | 71.0        | 79.5        | 97.9        | 112.6 | 128.8       | 138.0       | 161.0       |
| GR22 | Ionia Nisia                         | 45.2 | 71.1        | 80.0        | 82.1        | 93.1  | 119.5       | 129.2       | 135.0       |
| GR23 | Dytiki Ellada                       | 43.9 | 76.1        | 85.6        | 93.3        | 108.1 | 140.7       | 151.3       | 162.0       |
| GR24 | Sterea Ellada                       | 46.3 | 57.2        | 63.7        | 88.9        | 100.3 | 110.2       | 117.6       | 148.4       |
| GR25 | Peloponnisos                        | 48.9 | 59.4        | 66.3        | 84.6        | 95.5  | 106.5       | 114.4       | 136.7       |
| GR30 | Attiki                              | 34.4 | 82.0        | 92.6        | 98.3        | 92.2  | 144.6       | 156.3       | 160.5       |
| GR41 | Voreio Aigaio                       | 55.9 | 78.6        | 87.6        | 103.1       | 127.3 | 151.1       | 161.0       | 179.0       |
| GR42 | Notio Aigaio                        | 32.8 | 73.4        | 81.6        | 84.0        | 91.7  | 136.0       | 145.2       | 149.4       |
| GR43 | Kriti                               | 36.0 | 75.1        | 84.5        | 74.7        | 82.3  | 125.0       | 135.4       | 125.9       |
|      | Hungary                             |      |             |             |             |       |             |             |             |
| HU10 | Közép-Magyarország                  | 34.8 | 55.1        | 59.1        | 73.6        | 88.0  | 111.3       | 114.5       | 128.1       |
| HU21 | Közép-Dunántúl                      | 32.8 | 62.7        | 65.4        | 65.1        | 92.6  | 125.2       | 127.9       | 128.1       |
| HU22 | Nyugat-Dunántúl                     | 34.2 | 67.8        | 71.4        | 71.2        | 90.1  | 127.1       | 131.0       | 130.9       |
| HU23 | Dél-Dunántúl                        | 39.8 | 70.9        | 74.2        | 68.9        | 115.7 | 150.2       | 153.7       | 147.9       |
| HU31 | Észak-Magyarország                  | 42.0 | 70.0        | 72.8        | 59.7        | 123.5 | 153.4       | 156.4       | 142.4       |
| HU32 | Észak-Alföld                        | 38.5 | 70.6        | 73.6        | 62.2        | 123.8 | 159.2       | 162.3       | 149.8       |
| HU33 | Dél-Alföld                          | 41.5 | 72.6        | 76.5        | 70.7        | 117.7 | 151.2       | 155.3       | 149.0       |
|      | Ireland                             |      |             |             |             |       |             |             |             |
| IE01 | Border, Midlands and<br>Western     | 24.1 | 46.5        | 48.4        | 44.3        | 68.0  | 91.0        | 92.9        | 89.0        |
| IE02 | Southern and Eastern                | 20.2 | 44.2        | 46.0        | 49.1        | 61.8  | 87.5        | 89.2        | 92.2        |
| IS00 | Iceland                             | 16.3 | 37.9        | 38.0        | 30.9        | 31.8  | 52.6        | 52.8        | 46.1        |
|      | Italy                               |      |             |             |             |       |             |             |             |
| ITC1 | Piemonte                            | 48.6 | 67.2        | 91.4        | 101.6       | 98.5  | 121.9       | 147.6       | 157.1       |
| ITC2 | Valle d'Aosta/Vallée<br>d'Aoste     | 41.6 | 70.1        | 89.1        | 94.5        | 87.5  | 123.4       | 143.4       | 147.1       |
| ITC3 | Liguria                             | 63.0 | 69.6        | 93.5        | 111.9       | 118.2 | 128.1       | 153.3       | 171.8       |
| ITC4 | Lombardia                           | 39.7 | 62.0        | 84.1        | 96.2        | 86.4  | 113.5       | 137.3       | 148.9       |
| ITD1 | Provincia Autonoma<br>Bolzano-Bozen | 32.8 | 57.7        | 71.0        | 73.5        | 73.0  | 103.3       | 117.7       | 119.7       |
| ITD2 | Provincia Autonoma<br>Trento        | 39.6 | 62.0        | 79.6        | 84.5        | 87.9  | 116.9       | 135.1       | 139.4       |
| ITD3 | Veneto                              | 40.0 | 66.0        | 90.1        | 98.8        | 88.8  | 120.9       | 146.5       | 154.3       |
| ITD4 | Friuli-Venezia Giulia               | 49.5 | 73.4        | 98.5        | 109.3       | 103.0 | 131.9       | 158.3       | 167.8       |
| ITD5 | Emilia-Romagna                      | 46.9 | 64.5        | 86.3        | 101.1       | 88.0  | 111.7       | 134.6       | 148.2       |
| ITE1 | Toscana                             | 50.7 | 69.1        | 92.9        | 106.1       | 100.0 | 122.8       | 147.9       | 160.3       |
| ITE2 | Umbria                              | 53.1 | 66.7        | 90.6        | 103.8       | 106.6 | 125.0       | 149.7       | 162.3       |
| ITE3 | Marche                              | 49.2 | 69.2        | 92.0        | 102.7       | 97.7  | 123.3       | 147.2       | 157.5       |

Table 4. continued

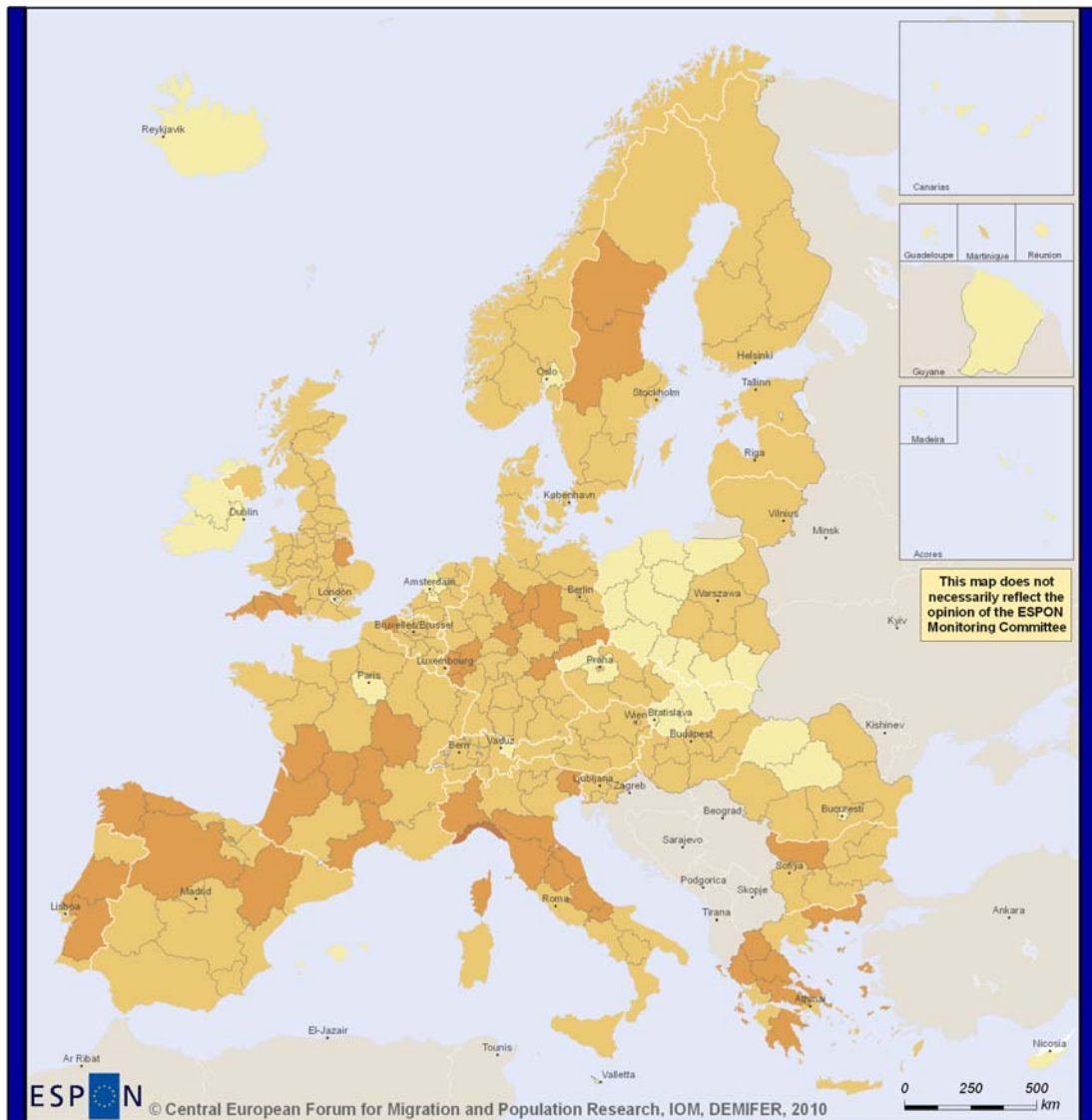
|             |                                 | EODR |             |             |             | LMDR  |             |             |             |
|-------------|---------------------------------|------|-------------|-------------|-------------|-------|-------------|-------------|-------------|
|             |                                 | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005  | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| ITE4        | Lazio                           | 42.3 | 66.6        | 87.6        | 99.4        | 100.6 | 130.0       | 152.3       | 163.3       |
| ITF1        | Abruzzo                         | 50.2 | 77.8        | 99.1        | 109.3       | 112.8 | 146.0       | 168.5       | 179.1       |
| ITF2        | Molise                          | 56.0 | 91.6        | 111.5       | 115.4       | 129.4 | 171.5       | 192.5       | 197.3       |
| ITF3        | Campania                        | 41.0 | 84.5        | 98.8        | 88.9        | 130.9 | 183.4       | 197.8       | 183.7       |
| ITF4        | Puglia                          | 46.1 | 102.1       | 117.7       | 107.8       | 135.9 | 196.9       | 214.2       | 201.8       |
| ITF5        | Basilicata                      | 51.3 | 98.5        | 117.1       | 110.7       | 129.8 | 184.8       | 205.1       | 197.4       |
| ITF6        | Calabria                        | 49.1 | 95.1        | 119.5       | 108.4       | 137.5 | 191.0       | 217.1       | 203.3       |
| ITG1        | Sicilia                         | 49.3 | 90.8        | 105.7       | 95.3        | 139.7 | 185.7       | 202.8       | 189.7       |
| ITG2        | Sardegna                        | 39.8 | 105.0       | 122.8       | 126.6       | 108.6 | 180.2       | 199.0       | 203.1       |
| LI00        | Liechtenstein                   | 17.4 | 58.3        | 59.6        | 57.3        | 40.3  | 82.1        | 83.5        | 81.5        |
| LT00        | Lithuania                       | 30.6 | 55.3        | 56.1        | 51.0        | 75.2  | 96.4        | 97.9        | 93.0        |
| LU00        | Luxembourg (Grand-Duché)        | 31.2 | 55.3        | 56.4        | 68.5        | 82.0  | 113.4       | 114.8       | 128.7       |
| LV00        | Latvia                          | 30.2 | 45.7        | 46.7        | 47.2        | 72.6  | 85.9        | 87.2        | 88.0        |
| MT00        | Malta                           | 32.5 | 78.6        | 80.1        | 80.2        | 104.9 | 156.6       | 159.9       | 161.9       |
| Netherlands |                                 |      |             |             |             |       |             |             |             |
| NL11        | Groningen                       | 27.3 | 48.3        | 53.4        | 60.4        | 62.7  | 86.4        | 91.9        | 99.4        |
| NL12        | Friesland (NL)                  | 28.2 | 48.9        | 53.7        | 46.3        | 60.7  | 83.5        | 88.7        | 80.7        |
| NL13        | Drenthe                         | 30.6 | 45.8        | 49.6        | 45.5        | 62.0  | 78.6        | 82.9        | 78.5        |
| NL21        | Overijssel                      | 26.5 | 46.8        | 50.9        | 45.3        | 58.1  | 81.5        | 85.9        | 79.5        |
| NL22        | Gelderland                      | 26.2 | 47.9        | 52.1        | 47.4        | 56.4  | 81.0        | 85.5        | 80.4        |
| NL23        | Flevoland                       | 15.7 | 39.1        | 43.0        | 42.6        | 45.5  | 74.1        | 78.3        | 77.2        |
| NL31        | Utrecht                         | 22.4 | 43.0        | 47.0        | 50.9        | 50.5  | 74.5        | 78.6        | 82.2        |
| NL32        | Noord-Holland                   | 24.3 | 44.3        | 49.8        | 54.5        | 52.8  | 76.0        | 81.8        | 86.2        |
| NL33        | Zuid-Holland                    | 25.6 | 45.4        | 51.2        | 52.7        | 56.4  | 79.2        | 85.5        | 87.0        |
| NL34        | Zeeland                         | 33.1 | 52.2        | 57.4        | 49.1        | 67.4  | 88.0        | 93.6        | 84.5        |
| NL41        | Noord-Brabant                   | 25.2 | 50.3        | 55.3        | 50.0        | 54.9  | 83.2        | 88.4        | 82.7        |
| NL42        | Limburg (NL)                    | 30.2 | 57.4        | 63.6        | 54.0        | 65.2  | 95.1        | 101.9       | 92.3        |
| Norway      |                                 |      |             |             |             |       |             |             |             |
| NO01        | Oslo og Akershus                | 21.7 | 35.3        | 39.1        | 49.8        | 48.0  | 63.3        | 67.1        | 77.8        |
| NO02        | Hedmark og Oppland              | 33.6 | 47.8        | 52.5        | 45.5        | 65.3  | 80.1        | 85.0        | 77.9        |
| NO03        | Sør-Østlandet                   | 28.9 | 45.8        | 50.2        | 45.6        | 60.3  | 78.1        | 82.5        | 77.9        |
| NO04        | Agder og Rogaland               | 23.9 | 41.9        | 45.8        | 41.2        | 53.7  | 72.6        | 76.6        | 71.9        |
| NO05        | Vestlandet                      | 27.2 | 45.3        | 49.6        | 42.1        | 55.1  | 74.2        | 78.7        | 70.9        |
| NO06        | Trøndelag                       | 27.2 | 44.4        | 48.4        | 44.0        | 59.3  | 77.3        | 81.5        | 76.8        |
| NO07        | Nord-Norge                      | 27.0 | 47.4        | 53.1        | 42.6        | 58.0  | 79.2        | 85.0        | 74.5        |
| Poland      |                                 |      |             |             |             |       |             |             |             |
| PL11        | Lódzkie                         | 26.6 | 57.8        | 59.0        | 56.9        | 62.3  | 97.9        | 99.5        | 97.5        |
| PL12        | Mazowieckie                     | 30.5 | 61.1        | 63.5        | 70.2        | 87.0  | 121.8       | 124.8       | 132.4       |
| PL21        | Malopolskie                     | 27.7 | 59.9        | 63.1        | 64.6        | 82.6  | 118.9       | 123.0       | 125.2       |
| PL22        | Slaskie                         | 28.2 | 103.0       | 106.3       | 77.8        | 96.0  | 178.4       | 183.1       | 152.4       |
| PL31        | Lubelskie                       | 26.9 | 55.5        | 56.7        | 52.0        | 66.8  | 99.7        | 101.3       | 96.1        |
| PL32        | Podkarpackie                    | 28.4 | 65.8        | 68.8        | 63.9        | 91.5  | 134.2       | 138.2       | 133.6       |
| PL33        | Swietokrzyskie                  | 29.0 | 64.1        | 65.8        | 59.5        | 74.2  | 115.1       | 117.3       | 110.7       |
| PL34        | Podlaskie                       | 32.7 | 73.4        | 76.6        | 69.0        | 98.1  | 144.7       | 148.9       | 141.6       |
| PL41        | Wielkopolskie                   | 24.5 | 61.8        | 63.0        | 62.4        | 80.8  | 122.5       | 124.1       | 123.8       |
| PL42        | Zachodniopomorskie              | 26.8 | 72.8        | 75.3        | 72.0        | 97.4  | 149.1       | 152.3       | 149.1       |
| PL43        | Lubuskie                        | 22.3 | 58.2        | 61.6        | 59.2        | 70.2  | 110.0       | 114.4       | 112.8       |
| PL51        | Dolnoslaskie                    | 28.6 | 74.6        | 78.3        | 75.7        | 91.2  | 142.3       | 147.0       | 145.0       |
| PL52        | Opolskie                        | 32.6 | 103.6       | 133.4       | 92.2        | 117.3 | 191.6       | 226.3       | 188.1       |
| PL61        | Kujawsko-Pomorskie              | 25.0 | 64.6        | 65.6        | 61.4        | 79.2  | 123.9       | 125.3       | 120.8       |
| PL62        | Warmińsko-Mazurskie             | 25.6 | 72.3        | 74.6        | 62.7        | 93.2  | 145.7       | 149.0       | 136.3       |
| PL63        | Pomorskie                       | 28.7 | 77.4        | 79.8        | 73.6        | 111.4 | 165.8       | 168.6       | 161.5       |
| Portugal    |                                 |      |             |             |             |       |             |             |             |
| PT11        | Norte                           | 23.0 | 58.8        | 59.5        | 55.2        | 58.7  | 95.1        | 95.7        | 91.2        |
| PT15        | Algarve                         | 30.8 | 39.8        | 48.9        | 52.1        | 69.7  | 81.1        | 89.8        | 92.6        |
| PT16        | Centro (PT)                     | 28.5 | 49.7        | 53.0        | 50.7        | 51.6  | 73.6        | 76.7        | 74.2        |
| PT17        | Lisboa                          | 26.4 | 43.9        | 52.0        | 55.6        | 65.9  | 84.9        | 92.5        | 95.3        |
| PT18        | Alentejo                        | 38.5 | 54.9        | 58.7        | 56.1        | 76.0  | 93.4        | 96.7        | 94.1        |
| PT20        | Região Autónoma dos Açores (PT) | 23.2 | 44.7        | 46.3        | 41.8        | 76.7  | 96.2        | 98.3        | 94.5        |
| PT30        | Região Autónoma da Madeira (PT) | 22.5 | 40.9        | 45.8        | 43.4        | 66.4  | 84.7        | 89.5        | 87.2        |
| Romania     |                                 |      |             |             |             |       |             |             |             |
| RO11        | Nord-Vest                       | 24.8 | 48.6        | 49.5        | 45.1        | 93.1  | 112.5       | 114.3       | 111.7       |
| RO12        | Centru                          | 25.8 | 56.0        | 57.1        | 51.1        | 98.5  | 120.7       | 123.2       | 122.0       |
| RO21        | Nord-Est                        | 22.5 | 40.5        | 41.1        | 34.7        | 69.3  | 86.0        | 86.9        | 80.9        |
| RO22        | Sud-Est                         | 25.8 | 52.4        | 53.6        | 50.1        | 91.8  | 114.2       | 116.4       | 115.5       |
| RO31        | Sud - Muntenia                  | 27.5 | 47.6        | 48.6        | 44.1        | 81.6  | 100.2       | 101.7       | 98.4        |
| RO32        | Bucuresti - Ilfov               | 24.8 | 39.9        | 49.0        | 66.4        | 88.5  | 97.6        | 107.8       | 127.3       |
| RO41        | Sud-Vest Oltenia                | 25.8 | 46.1        | 46.7        | 42.4        | 74.7  | 94.4        | 95.5        | 92.1        |
| RO42        | Vest                            | 26.0 | 47.4        | 49.5        | 48.6        | 93.4  | 108.8       | 112.4       | 115.9       |

Table 4. continued

|                |  | EODR |             |             |             | LMDR |             |             |             |
|----------------|--|------|-------------|-------------|-------------|------|-------------|-------------|-------------|
|                |  | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ | 2005 | 2050<br>NMI | 2050<br>NEM | 2050<br>STQ |
| Sweden         |  |      |             |             |             |      |             |             |             |
| SE11           | Stockholm  | 24.4 | 35.6        | 40.1        | 50.6        | 49.7 | 62.0        | 66.5        | 77.2        |
| SE12           | Östra Mellansverige                              | 32.7 | 45.5        | 50.9        | 48.4        | 63.6 | 75.7        | 81.2        | 78.5        |
| SE21           | Småland med öarna                                | 34.6 | 43.8        | 49.2        | 42.9        | 58.7 | 66.8        | 72.4        | 66.1        |
| SE22           | Sydsverige                                       | 33.7 | 43.3        | 49.1        | 51.2        | 65.0 | 74.2        | 80.1        | 82.0        |
| SE23           | Västsverige                                      | 31.5 | 44.1        | 49.4        | 48.6        | 59.4 | 71.8        | 77.2        | 76.4        |
| SE31           | Norra Mellansverige                              | 38.1 | 47.3        | 53.2        | 44.5        | 68.7 | 76.9        | 82.9        | 74.5        |
| SE32           | Mellersta Norrland                               | 38.2 | 45.7        | 51.2        | 42.9        | 67.2 | 74.0        | 79.7        | 71.8        |
| SE33           | Övre Norrland                                    | 34.4 | 49.4        | 55.8        | 48.6        | 66.1 | 80.3        | 86.9        | 79.2        |
| Slovenia       |  |      |             |             |             |      |             |             |             |
| SI01           | Vzhodna Slovenija                                | 29.7 | 70.8        | 76.4        | 76.3        | 70.7 | 117.0       | 124.3       | 125.0       |
| SI02           | Zahodna Slovenija                                | 30.5 | 68.1        | 74.5        | 80.3        | 69.5 | 111.1       | 119.2       | 126.4       |
| Slovakia       |  |      |             |             |             |      |             |             |             |
| SK01           | Bratislavský kraj                                | 20.4 | 49.7        | 58.7        | 68.8        | 57.3 | 89.3        | 100.5       | 111.8       |
| SK02           | Západné Slovensko                                | 23.0 | 56.1        | 63.4        | 66.7        | 69.3 | 105.3       | 115.1       | 121.2       |
| SK03           | Stredné Slovensko                                | 22.2 | 53.7        | 58.1        | 56.0        | 69.5 | 105.0       | 111.1       | 109.8       |
| SK04           | Východné Slovensko                               | 21.2 | 47.4        | 49.8        | 48.1        | 72.1 | 101.6       | 105.1       | 103.8       |
| United Kingdom |  |      |             |             |             |      |             |             |             |
| UKC1           | Tees Valley and Durham                           | 34.2 | 43.8        | 50.3        | 45.4        | 79.1 | 89.5        | 96.1        | 91.3        |
| UKC2           | Northumberland, Tyne and Wear                    | 35.0 | 45.3        | 53.8        | 52.5        | 79.1 | 90.5        | 99.3        | 97.9        |
| UKD1           | Cumbria  | 33.9 | 40.5        | 46.3        | 44.3        | 60.5 | 67.4        | 73.5        | 71.7        |
| UKD2           | Cheshire   | 30.8 | 41.8        | 48.4        | 45.9        | 64.3 | 76.3        | 83.2        | 80.6        |
| UKD3           | Greater Manchester                               | 29.0 | 38.1        | 46.1        | 45.3        | 69.1 | 79.0        | 87.6        | 86.6        |
| UKD4           | Lancashire                                       | 32.9 | 39.9        | 45.9        | 43.2        | 71.1 | 78.5        | 84.8        | 82.0        |
| UKD5           | Merseyside                                       | 34.8 | 43.7        | 51.0        | 47.2        | 79.3 | 88.8        | 96.2        | 92.1        |
| UKE1           | East Yorkshire and Northern Lincolnshire         | 33.8 | 39.6        | 47.4        | 46.8        | 73.1 | 79.0        | 87.2        | 87.0        |
| UKE2           | North Yorkshire                                  | 33.8 | 41.1        | 50.3        | 51.2        | 65.1 | 72.2        | 81.9        | 83.6        |
| UKE3           | South Yorkshire                                  | 32.4 | 42.8        | 51.7        | 49.1        | 73.8 | 85.0        | 94.2        | 91.4        |
| UKE4           | West Yorkshire                                   | 28.3 | 37.9        | 47.3        | 46.1        | 64.2 | 74.8        | 84.6        | 82.9        |
| UKF1           | Derbyshire and Nottinghamshire                   | 31.3 | 43.7        | 53.0        | 51.7        | 68.7 | 82.0        | 91.7        | 90.2        |
| UKF2           | Leicestershire, Rutland and Northants            | 27.0 | 40.3        | 50.0        | 45.7        | 58.0 | 72.3        | 82.4        | 77.9        |
| UKF3           | Lincolnshire                                     | 35.9 | 37.0        | 43.2        | 45.0        | 65.0 | 65.3        | 71.6        | 74.1        |
| UKG1           | Herefordshire, Worcestershire and Warks          | 31.7 | 41.3        | 48.3        | 45.9        | 60.3 | 70.5        | 77.7        | 75.4        |
| UKG2           | Shropshire and Staffordshire                     | 31.0 | 42.0        | 48.0        | 44.8        | 64.6 | 75.9        | 82.0        | 79.1        |
| UKG3           | West Midlands                                    | 31.4 | 38.2        | 47.0        | 43.6        | 72.0 | 79.7        | 88.9        | 84.9        |
| UKH1           | East Anglia                                      | 33.4 | 42.3        | 52.4        | 50.1        | 63.2 | 72.7        | 83.2        | 80.7        |
| UKH2           | Bedfordshire, Hertfordshire                      | 26.2 | 37.9        | 47.4        | 45.6        | 53.4 | 67.0        | 76.8        | 74.5        |
| UKH3           | Essex  | 31.1 | 39.3        | 48.3        | 46.1        | 60.1 | 69.2        | 78.3        | 76.0        |
| UKI1           | Inner London                                     | 18.7 | 31.8        | 48.3        | 75.2        | 68.5 | 84.9        | 102.2       | 128.0       |
| UKI2           | Outer London                                     | 24.8 | 35.2        | 49.0        | 53.3        | 58.9 | 72.0        | 86.2        | 89.7        |
| UKJ1           | Berkshire, Bucks and Oxfordshire                 | 23.4 | 38.8        | 49.6        | 48.6        | 47.9 | 65.1        | 76.4        | 75.1        |
| UKJ2           | Surrey, East and West Sussex                     | 34.8 | 44.0        | 55.1        | 50.2        | 63.4 | 74.2        | 85.6        | 80.0        |
| UKJ3           | Hampshire and Isle of Wight                      | 30.0 | 40.8        | 50.1        | 51.3        | 58.7 | 70.2        | 79.7        | 81.0        |
| UKJ4           | Kent   | 31.4 | 41.4        | 50.7        | 44.3        | 63.6 | 74.2        | 83.8        | 77.2        |
| UKK1           | Gloucestershire, Wiltshire and Bristol/Bath area | 29.4 | 40.3        | 49.5        | 50.5        | 57.1 | 69.1        | 78.6        | 79.7        |
| UKK2           | Dorset and Somerset                              | 41.0 | 42.3        | 50.0        | 47.4        | 70.8 | 71.7        | 79.6        | 77.5        |
| UKK3           | Cornwall and Isles of Scilly                     | 39.9 | 39.5        | 45.5        | 48.8        | 75.1 | 73.5        | 79.4        | 83.4        |
| UKK4           | Devon  | 39.6 | 40.9        | 48.8        | 51.1        | 75.0 | 75.7        | 83.9        | 86.6        |
| UKL1           | West Wales and The Valleys                       | 38.7 | 43.4        | 48.6        | 46.3        | 84.0 | 88.5        | 93.9        | 91.5        |
| UKL2           | East Wales                                       | 30.9 | 40.5        | 47.2        | 47.4        | 64.7 | 74.7        | 81.6        | 81.7        |
| UKM2           | Eastern Scotland                                 | 29.6 | 38.9        | 47.8        | 50.7        | 60.4 | 70.4        | 79.7        | 82.7        |
| UKM3           | South Western Scotland                           | 33.1 | 43.6        | 51.7        | 50.3        | 79.7 | 91.1        | 99.6        | 98.1        |
| UKM5           | North Eastern Scotland                           | 26.9 | 36.1        | 46.2        | 46.9        | 54.2 | 64.8        | 75.2        | 76.2        |
| UKM6           | Highlands and Islands                            | 24.8 | 37.4        | 44.9        | 35.4        | 29.6 | 42.4        | 49.8        | 40.3        |
| UKN0           | Northern Ireland                                 | 28.8 | 41.5        | 49.2        | 46.3        | 77.1 | 90.3        | 98.1        | 95.1        |

Map 10. Old-Age Dependency Ratio, 2005

## Old Age Dependency Ratio 2005



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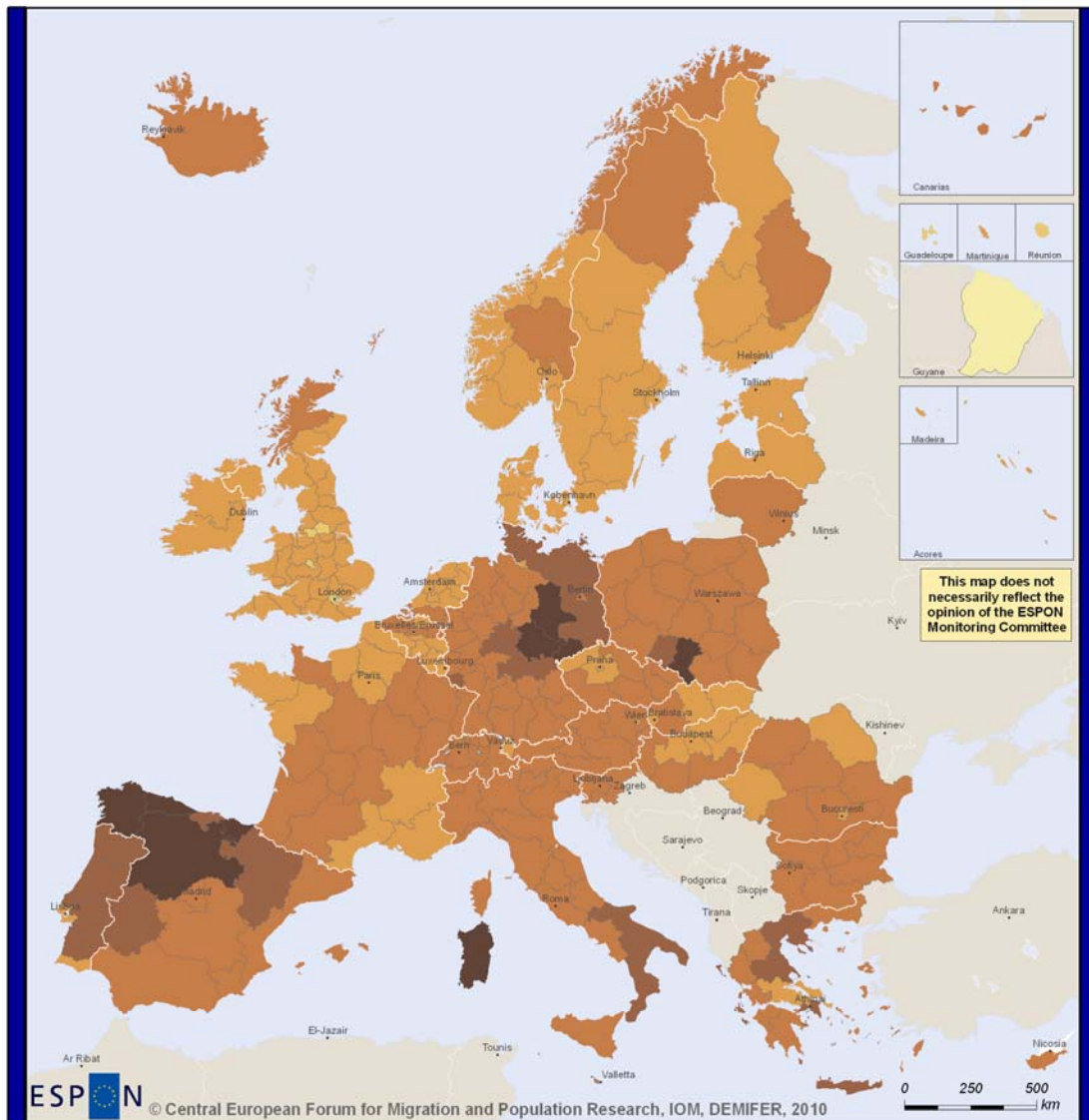
Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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### Old Age Dependency Ratio in 2005

|             |       |
|-------------|-------|
| 6.6 - 20.0  | (44)  |
| 20.0 - 30.0 | (195) |
| 30.0 - 40.0 | (47)  |
| 40.0 - 43.0 | (1)   |

Map 11. Old Age Dependency Ratio, Status quo (STQ) projection, 2050

## Old Age Dependency Ratio 2050 - STQ Scenario



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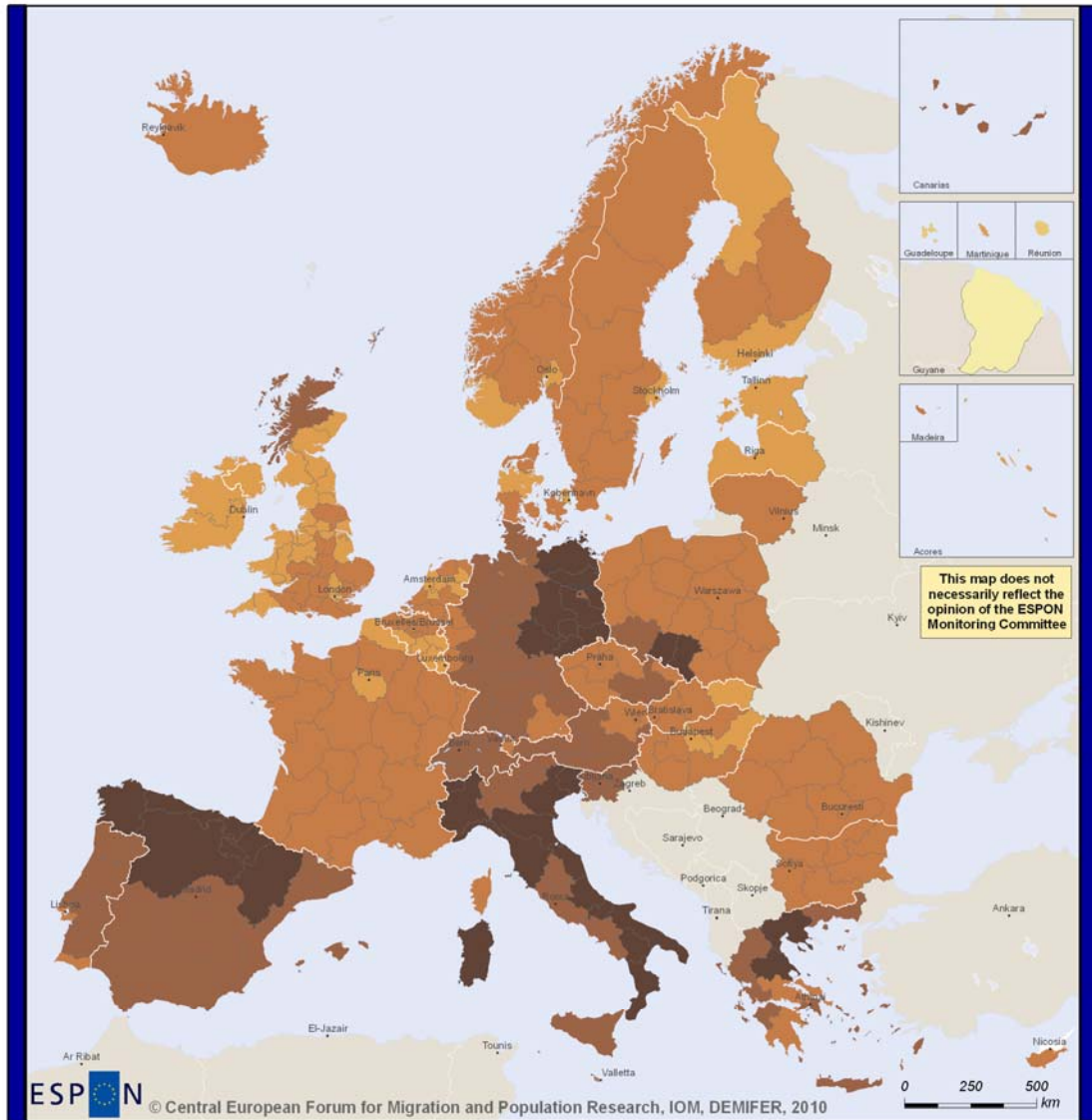
Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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Old Age Dependency Ratio in 2050 after DEMIFER Scenario "Status Quo (STQ)"

|             |       |
|-------------|-------|
| 15.0 - 20.0 | (1)   |
| 20.0 - 30.0 | (7)   |
| 30.0 - 40.0 | (105) |
| 40.0 - 50.0 | (135) |
| 50.0 - 60.0 | (30)  |
| 60.0 - 68.0 | (9)   |

**Map 12. Old Age Dependency Ratio, No extra-Europe migration (NEM) simulation, 2050**

## Old Age Dependency Ratio 2050 - NEM Scenario



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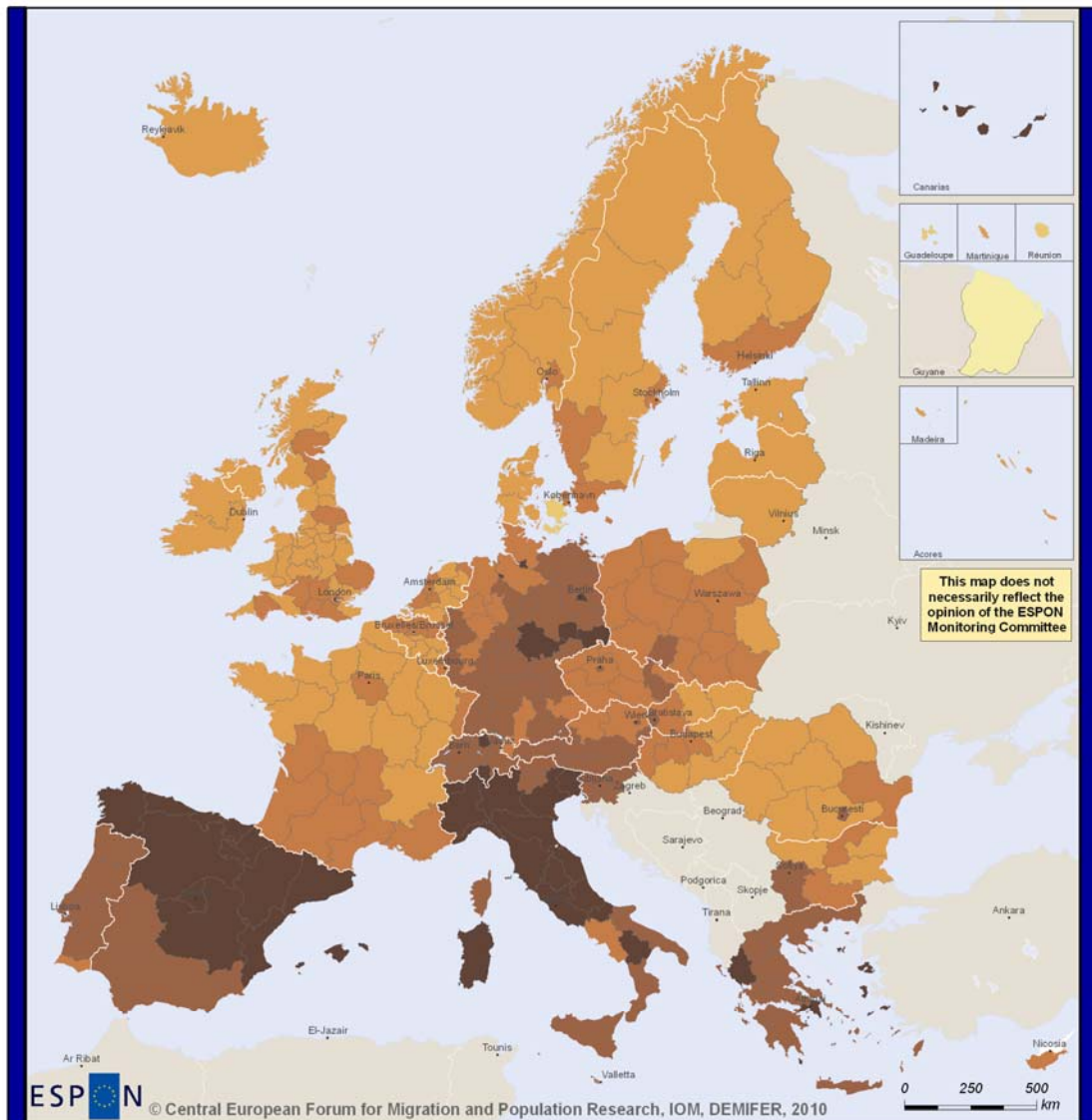
Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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**Old Age Dependency Ratio in 2050 after DEMIFER Scenario "No External Migration (NEM)"**

|             |       |
|-------------|-------|
| 15.0 - 20.0 | (1)   |
| 20.0 - 30.0 | (2)   |
| 30.0 - 40.0 | (53)  |
| 40.0 - 50.0 | (123) |
| 50.0 - 60.0 | (74)  |
| 60.0 - 79.0 | (34)  |

Map 13. Old Age Dependency Ratio, No migration (NMI) simulation, 2050

## Old Age Dependency Ratio 2050 - NMI Scenario



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Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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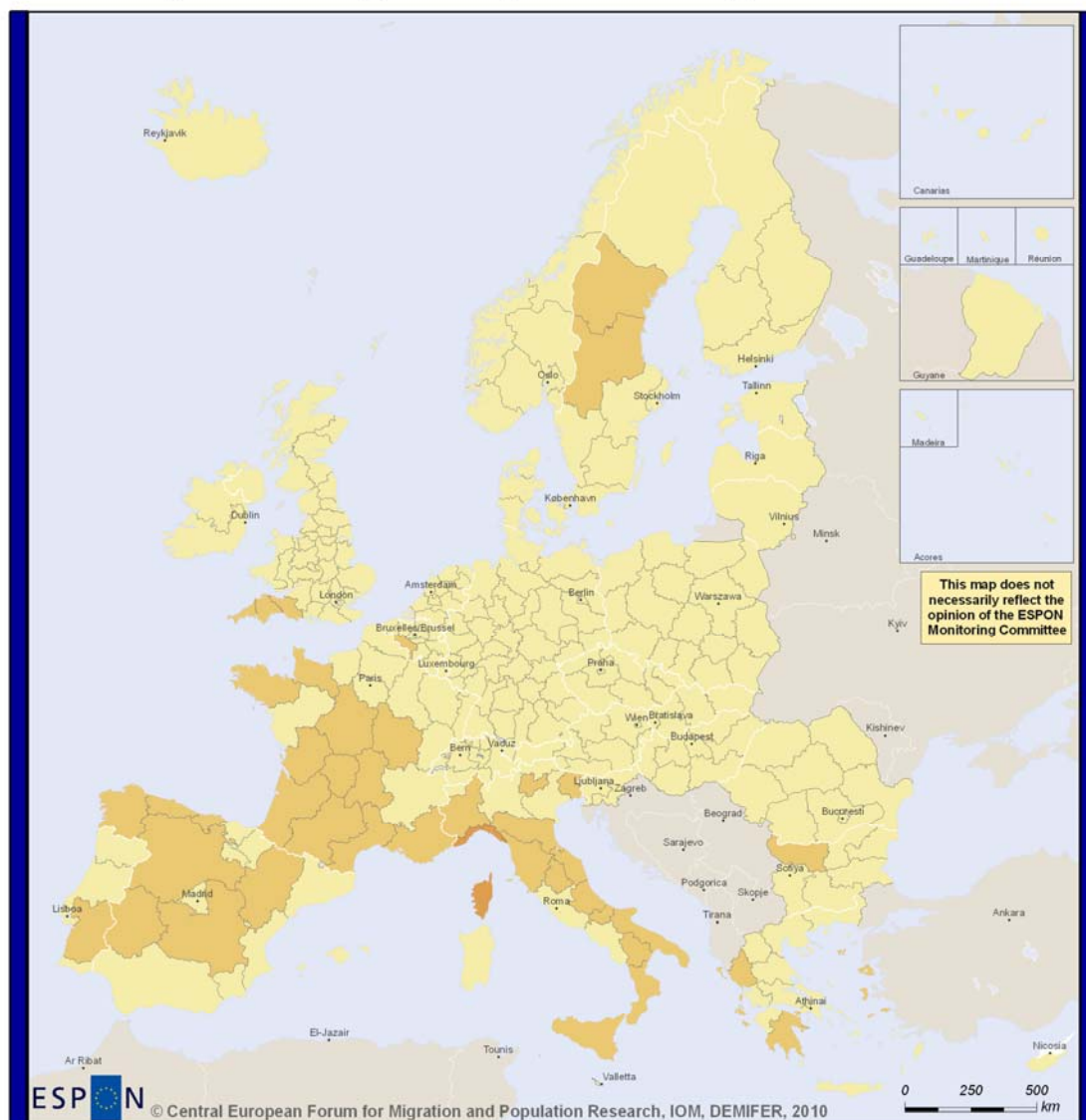
Old Age Dependency Ratio in 2050 after DEMIFER Scenario "No Migration (NMI)"

|             |      |
|-------------|------|
| 14.0 - 20.0 | (1)  |
| 20.0 - 30.0 | (3)  |
| 30.0 - 40.0 | (90) |
| 40.0 - 50.0 | (85) |
| 50.0 - 60.0 | (68) |
| 60.0 - 91.0 | (40) |



Map 14. Very Old Age Dependency Ratio, 2005

## Very Old Age Dependency Ratio 2005



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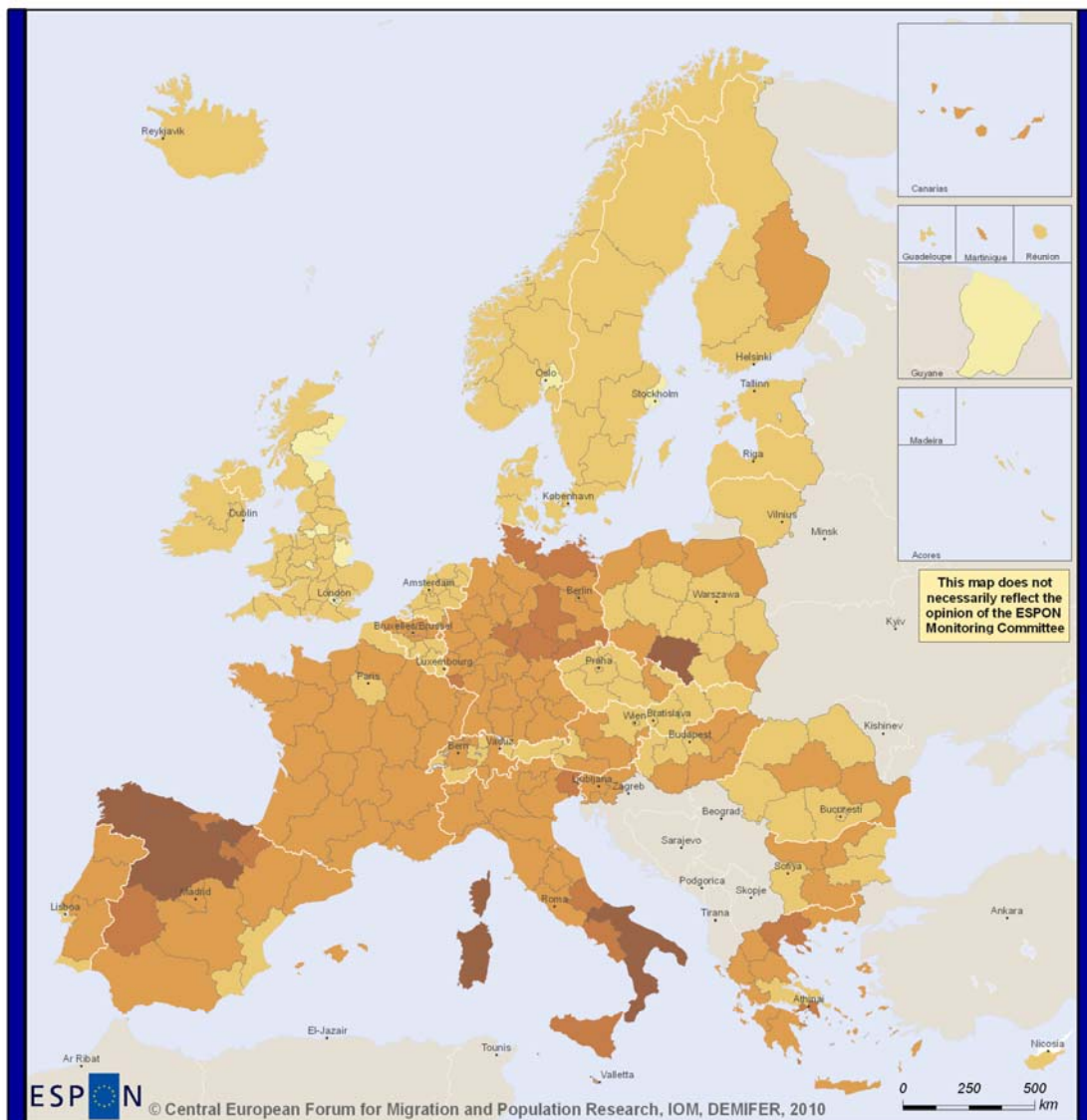
Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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Very Old Age Dependency Rate in 2005

|  |             |       |
|--|-------------|-------|
|  | 6.0 - 20.0  | (242) |
|  | 20.0 - 30.0 | (43)  |
|  | 30.0 - 32.0 | (2)   |

Map 15. Very Old Age Dependency Ratio, Status quo (STQ) projection, 2050

## Very Old Age Dependency 2050 - STQ Scenario



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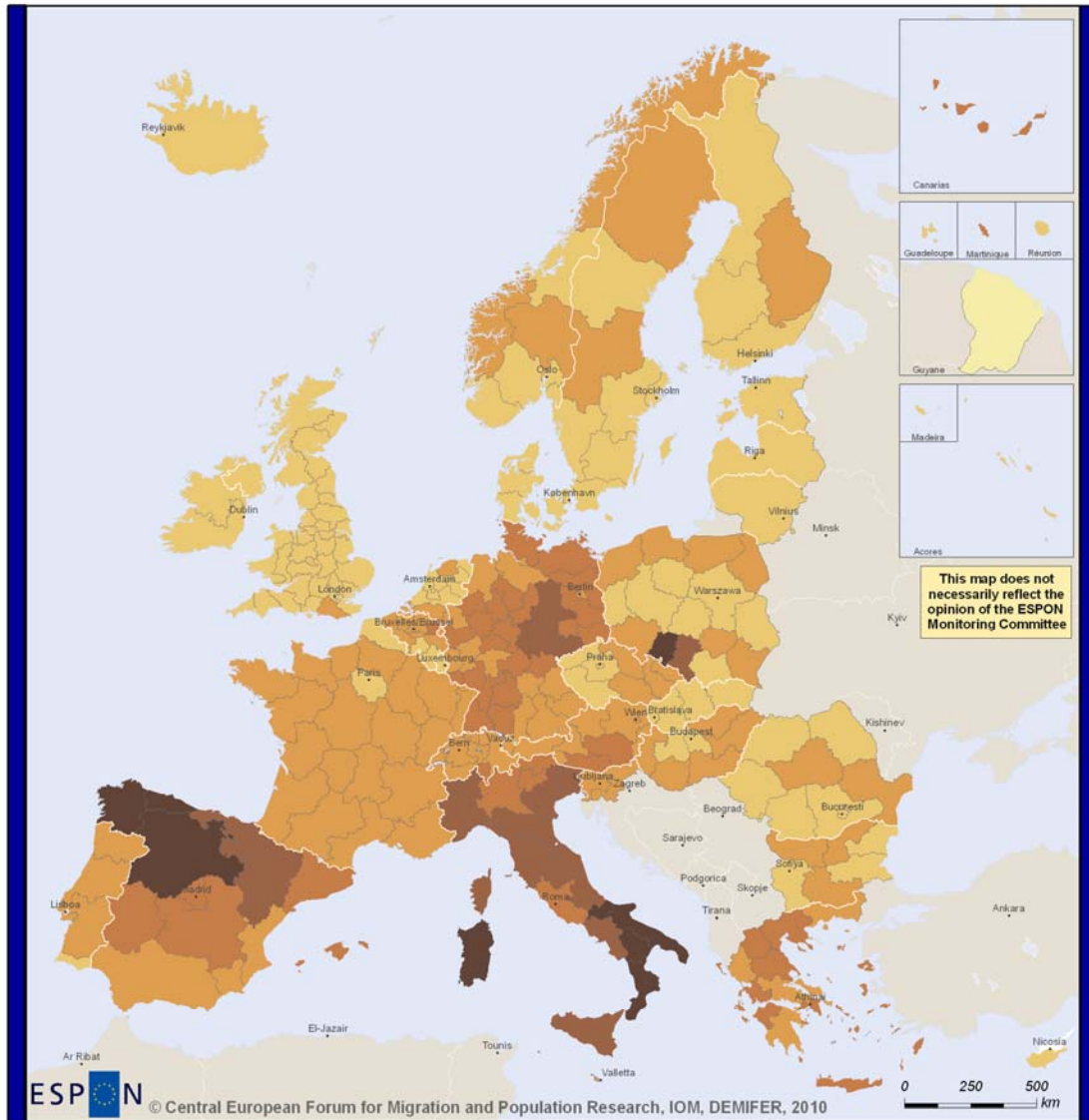
Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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Very Old Age Dependency Ratio in 2050 after  
DEMIFER Scenario "Status Quo (STQ)"

|             |       |
|-------------|-------|
| 16.0 - 20.0 | (11)  |
| 20.0 - 30.0 | (126) |
| 30.0 - 40.0 | (120) |
| 40.0 - 50.0 | (18)  |
| 50.0 - 60.0 | (12)  |

**Map 16. Very Old Age Dependency Ratio, *No extra-Europe migration (NEM)* projection, 2050**

### Very Old Age Dependency Ratio 2050 - NEM Scenario



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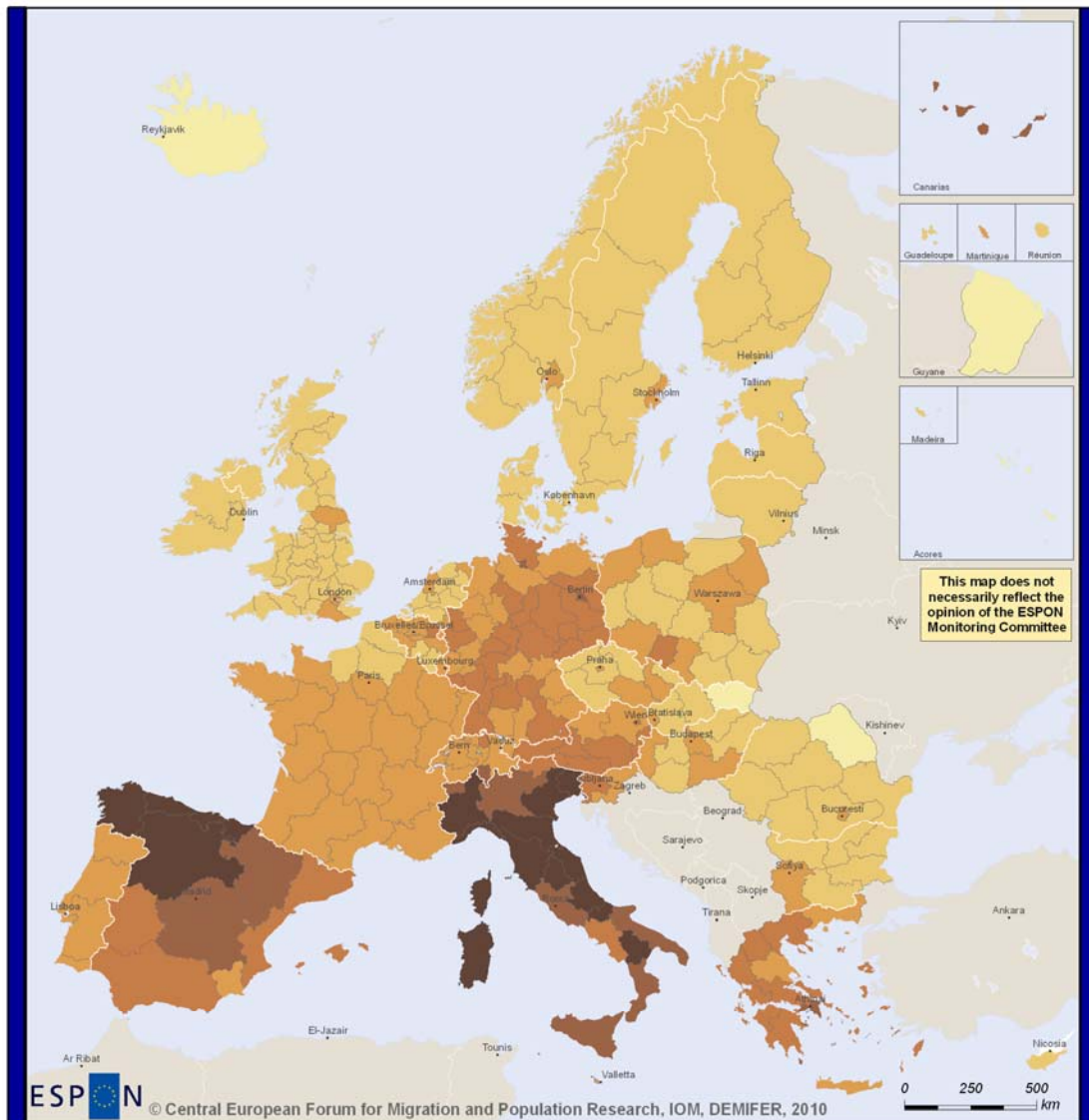
Regional level: NUTS 2  
 Source: ESPON 2013 Database, 2010  
 Origin of data: Eurostat, NSIs, Estimations, 2010  
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**Very Old Age Dependency Ratio in 2050 after DEMIFER Scenario "No External Migration (NEM)"**

|             |       |
|-------------|-------|
| 17.0 - 20.0 | (1)   |
| 20.0 - 30.0 | (106) |
| 30.0 - 40.0 | (102) |
| 40.0 - 50.0 | (47)  |
| 50.0 - 60.0 | (22)  |
| 60.0 - 77.0 | (9)   |

Map 17. Very Old Age Dependency Ratio, *No migration* (NMI) simulation, 2050

## Very Old Age Dependency 2050 - NMI Scenario



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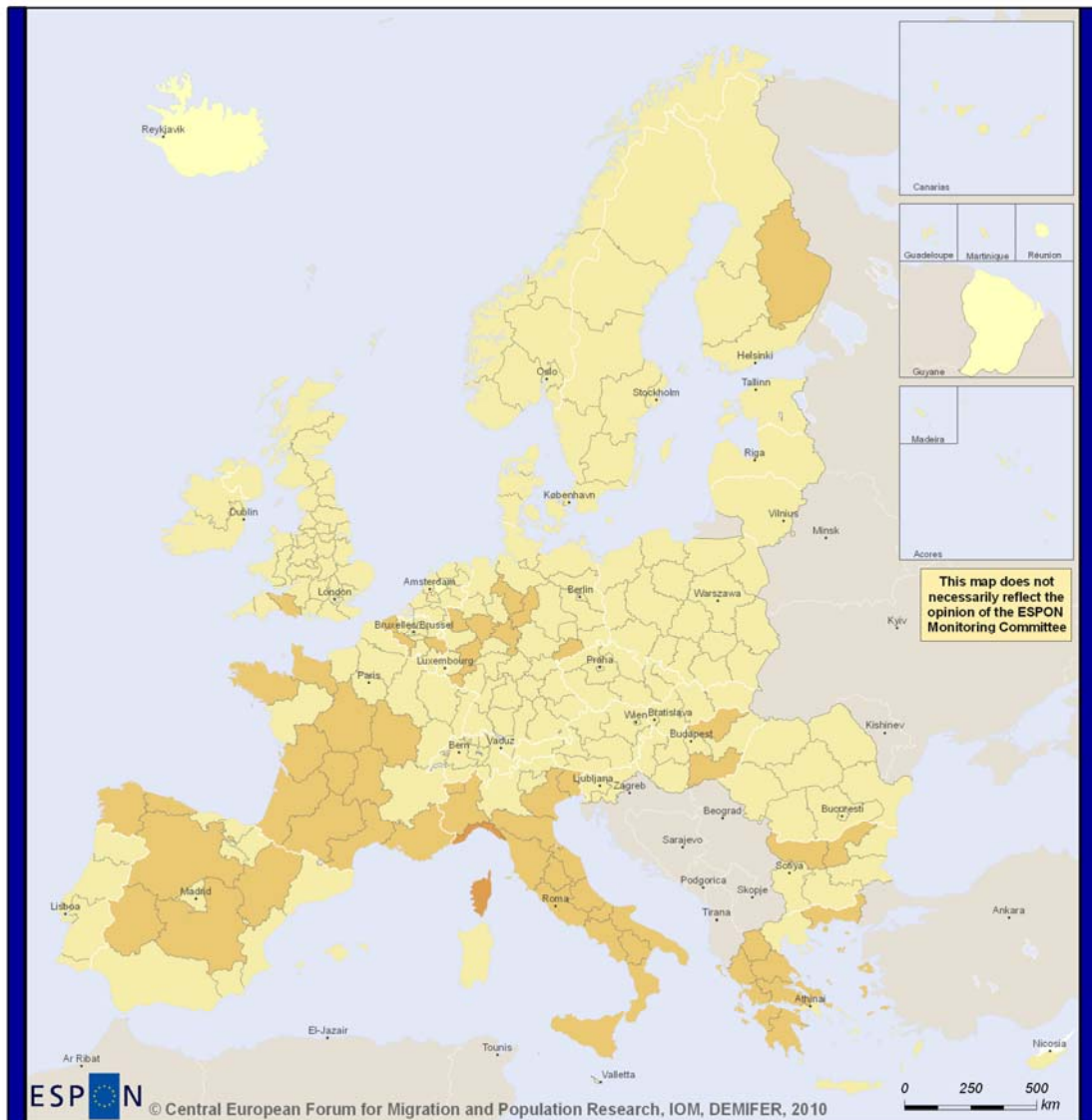
Very Old Age Dependency Ratio in 2050 after  
DEMIFER Scenario "No Migration (NMI)"

|             |       |
|-------------|-------|
| 16.0 - 20.0 | (5)   |
| 20.0 - 30.0 | (110) |
| 30.0 - 40.0 | (88)  |
| 40.0 - 50.0 | (49)  |
| 50.0 - 60.0 | (17)  |
| 60.0 - 81.0 | (18)  |

Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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Map 18. Economic Old-Age Dependency Ratio, 2005

## Economic Old Age Dependency Ratio 2005



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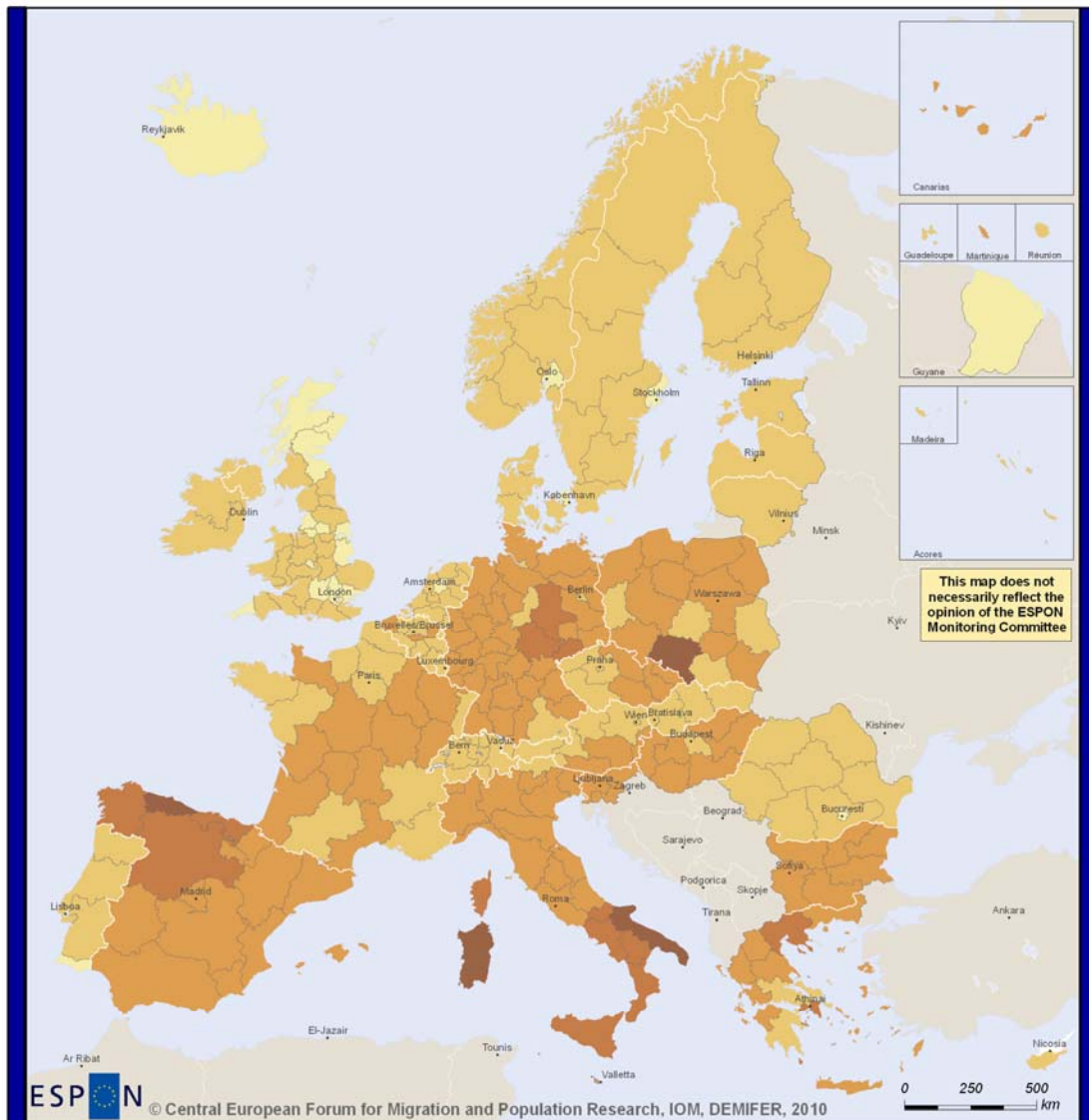
Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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Economic Old Age Dependency Ratio in 2005

|             |       |
|-------------|-------|
| 14.0 - 20.0 | (6)   |
| 20.0 - 40.0 | (219) |
| 40.0 - 60.0 | (60)  |
| 60.0 - 67.0 | (2)   |

**Map 19. Economic Old-Age Dependency Ratio, *Status quo* (STQ) projection, 2050**

### Economic Old Age Dependency 2050 - STQ Scenario



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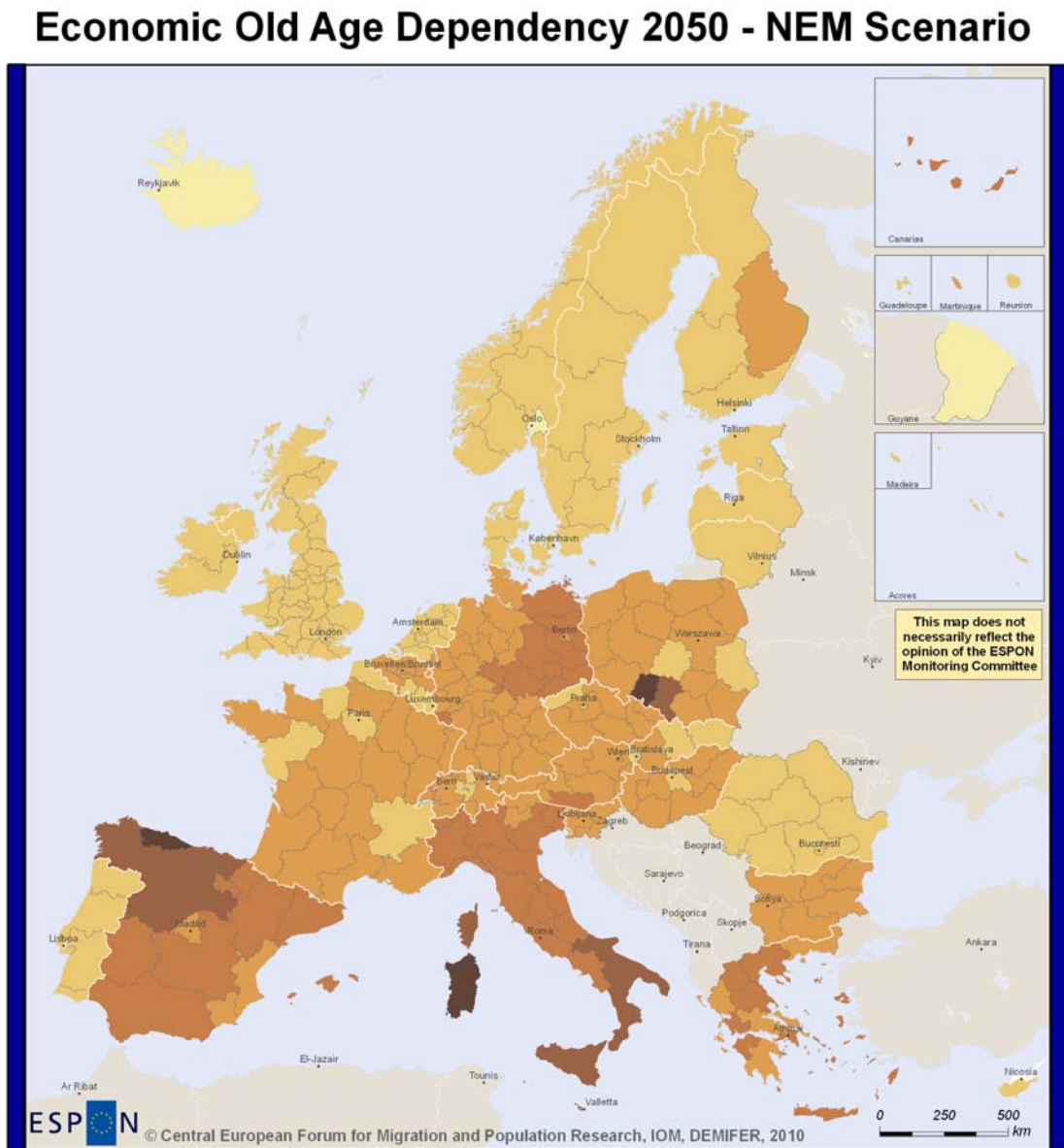
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Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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**Economic Old Age Dependency Ratio in 2050  
after DEMIFER scenario "Status Quo (STQ)"**

|               |       |
|---------------|-------|
| 31.0 - 40.0   | (23)  |
| 40.0 - 60.0   | (129) |
| 60.0 - 80.0   | (115) |
| 80.0 - 100.0  | (15)  |
| 100.0 - 109.0 | (5)   |

**Map 20. Economic Old-Age Dependency Ratio, *No extra-Europe migration (NEM)* simulation, 2050**



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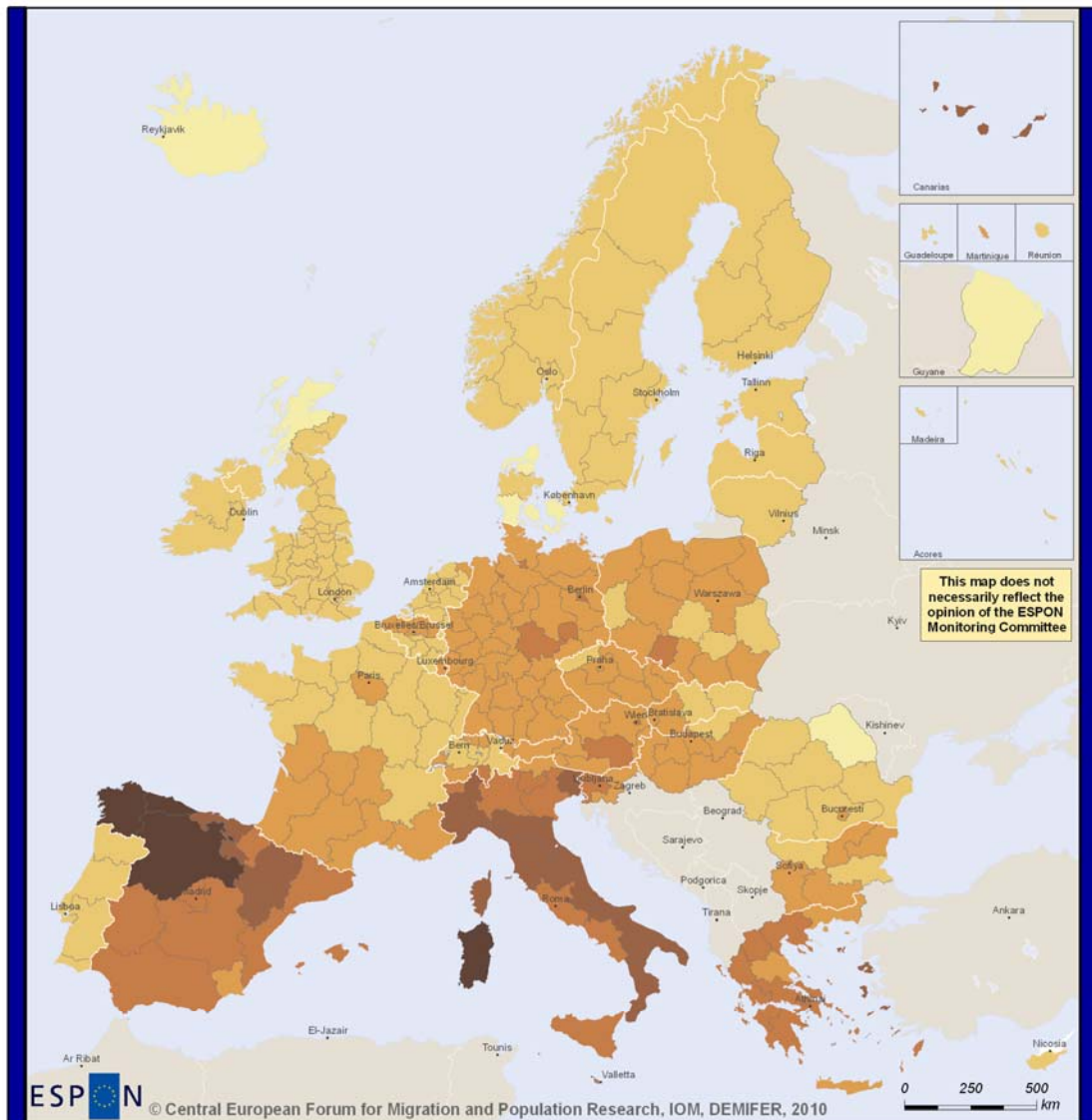
**Economic Old Age Dependency Ratio in 2050  
after DEMIFER scenario "No External  
Migration (NEM)"**

|  |               |       |
|--|---------------|-------|
|  | 34.0 - 40.0   | (3)   |
|  | 40.0 - 60.0   | (115) |
|  | 60.0 - 80.0   | (112) |
|  | 80.0 - 100.0  | (44)  |
|  | 100.0 - 120.0 | (11)  |
|  | 120.0 - 134.0 | (3)   |

Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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**Map 21. Economic Old Age Dependency Ratio, *No migration* (NMI) simulation, 2050**

### Economic Old Age Dependency 2050 - NMI Scenario



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Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
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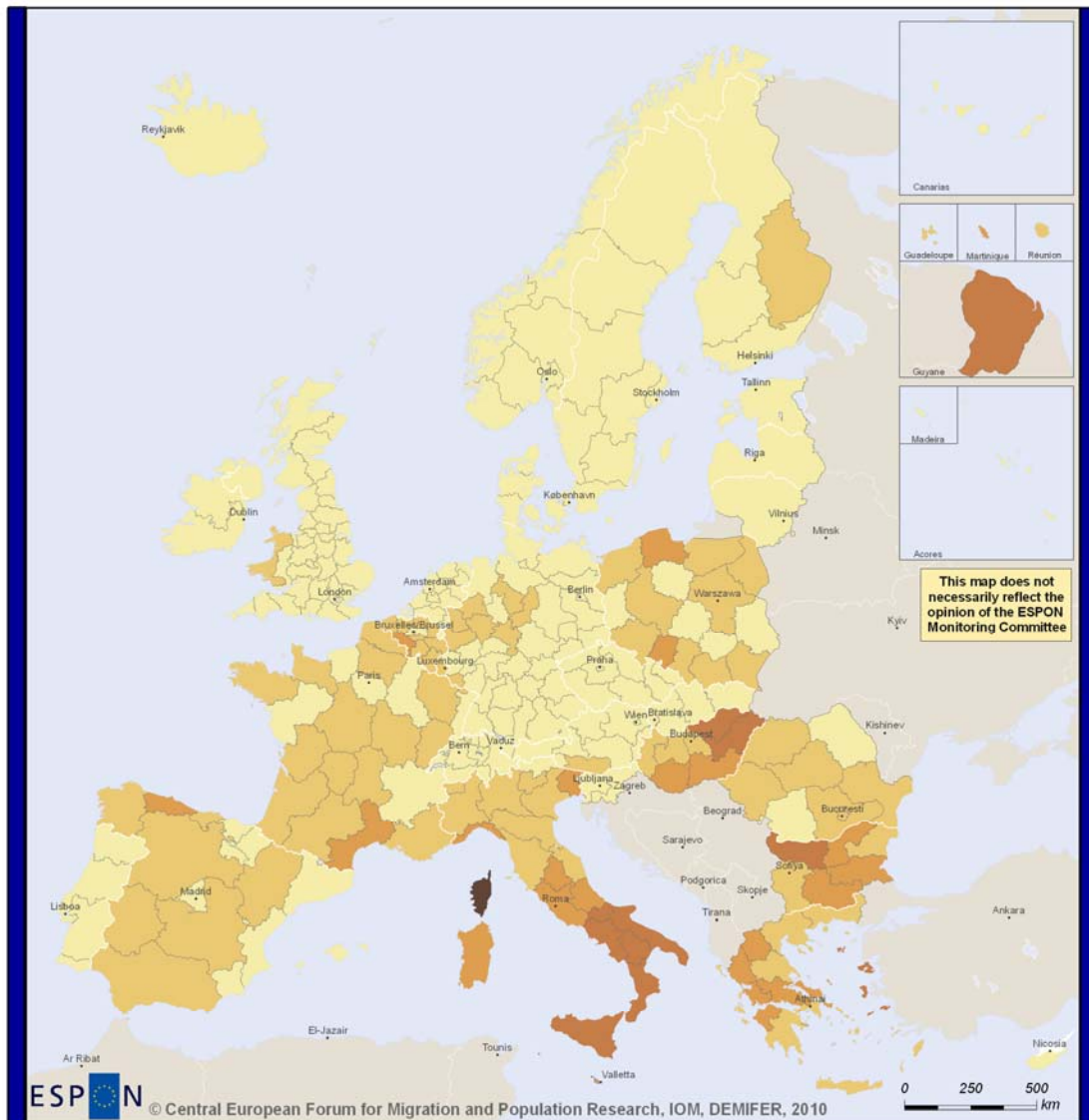
**Economic Old Age Dependency Ratio in 2050 after DEMIFER scenario "No Migration (NMI)"**

|               |       |
|---------------|-------|
| 30.0 - 40.0   | (7)   |
| 40.0 - 60.0   | (121) |
| 60.0 - 80.0   | (101) |
| 80.0 - 100.0  | (35)  |
| 100.0 - 120.0 | (19)  |
| 120.0 - 150.0 | (4)   |



Map 22. Labour Market Dependency Ratio, 2005

## Labour Market Dependency 2005



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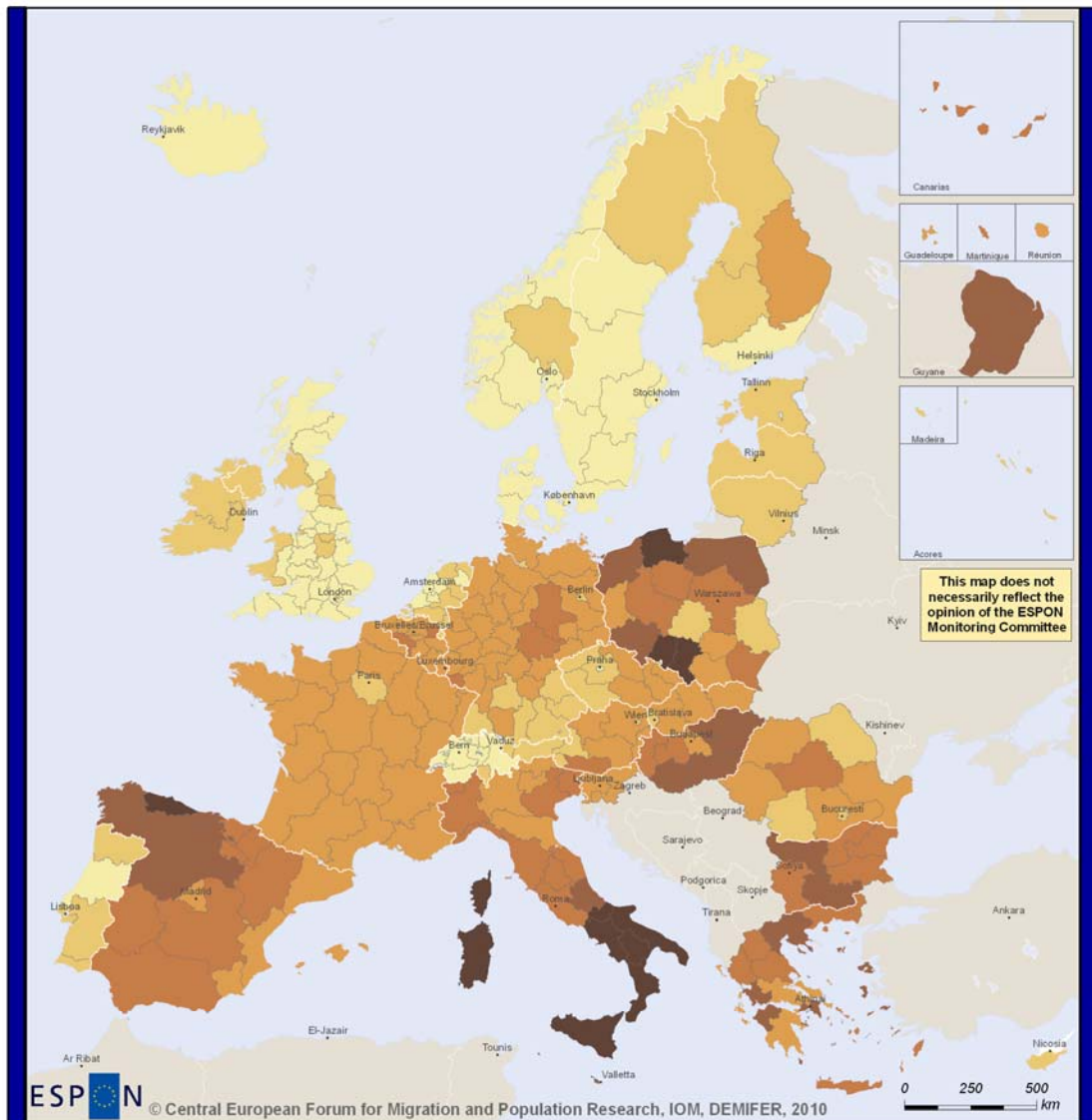
Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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### Labour Market Age Dependency Ratio in 2005

|               |       |
|---------------|-------|
| 29.0 - 80.0   | (170) |
| 80.0 - 100.0  | (83)  |
| 100.0 - 120.0 | (22)  |
| 120.0 - 140.0 | (11)  |
| 140.0 - 160.0 | (0)   |
| 160.0 - 190.0 | (1)   |

Map 23. Labour Market Dependency Ratio, *Status quo* (STQ) projection, 2050

## Labour Market Dependency Ratio 2050 - STQ Scenario



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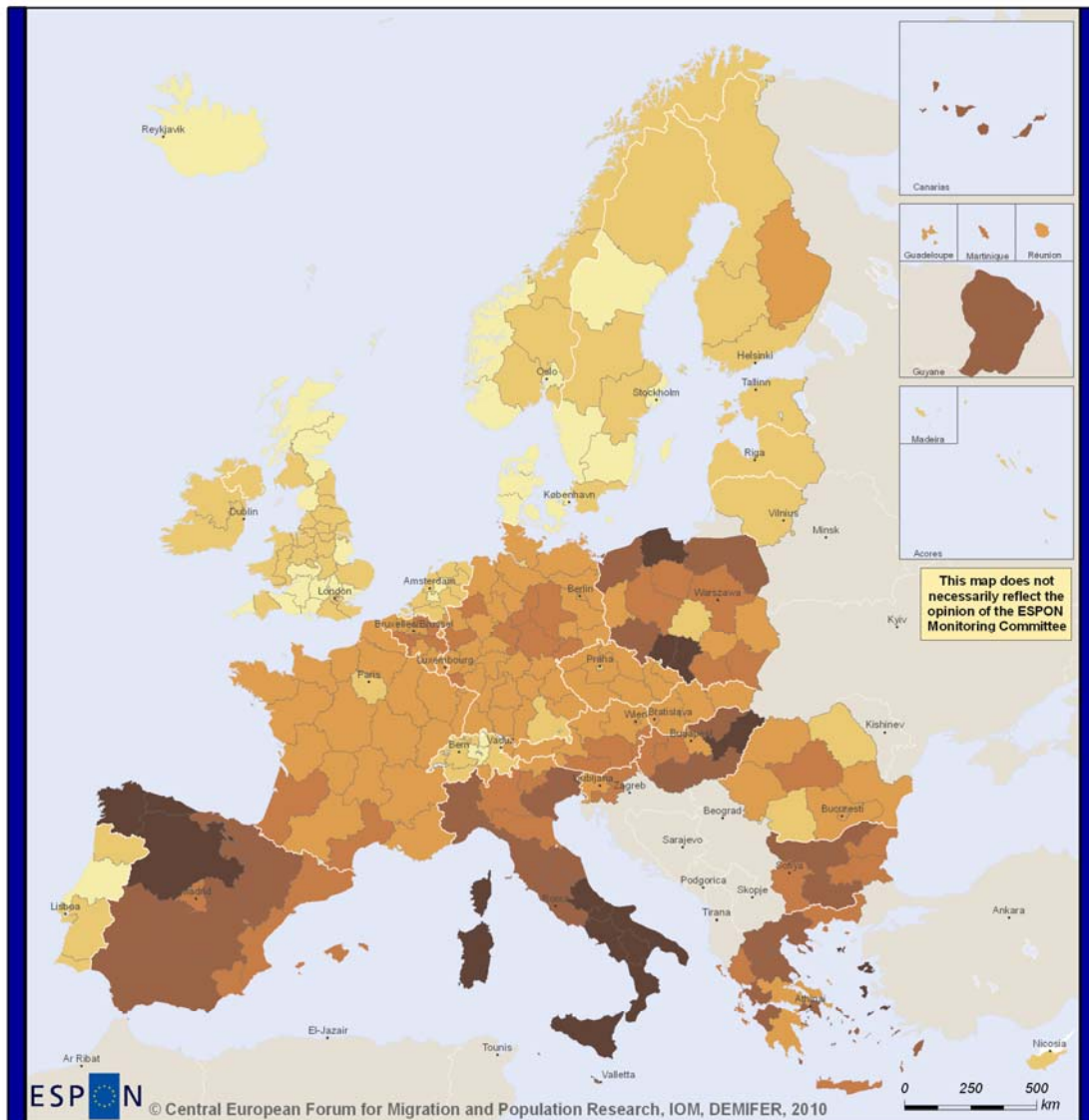
Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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### Labour Market Dependency Ratio in 2050 after DEMIFER Scenario "Status Quo (STQ)"

|               |      |
|---------------|------|
| 42.0 - 80.0   | (62) |
| 80.0 - 100.0  | (56) |
| 100.0 - 120.0 | (93) |
| 120.0 - 140.0 | (43) |
| 140.0 - 160.0 | (21) |
| 160.0 - 220.0 | (12) |

**Map 24. Labour Market Dependency Ratio, *No extra-Europe migration* (NEM) simulation, 2050**

## Labour Market Dependency Ratio 2050 - NEM Scenario



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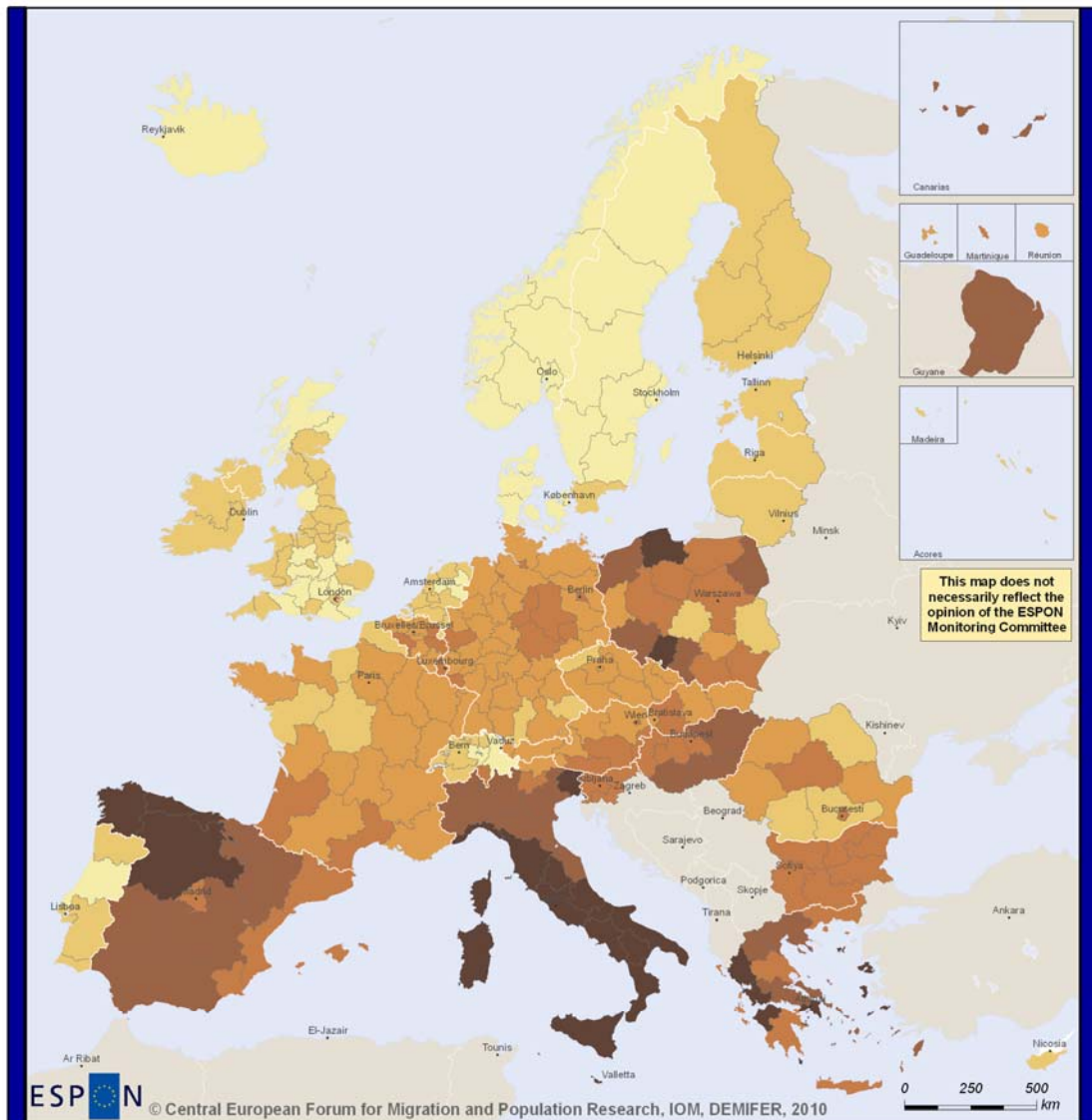
Regional level: NUTS 2  
 Source: ESPON 2013 Database, 2010  
 Origin of data: Eurostat, NSIs, Estimations, 2010  
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**Labour Market Dependency Ratio in 2050 after DEMIFER Scenario "No External Migration (NEM)"**

|  |               |      |
|--|---------------|------|
|  | 49.0 - 80.0   | (31) |
|  | 80.0 - 100.0  | (68) |
|  | 100.0 - 120.0 | (89) |
|  | 120.0 - 140.0 | (44) |
|  | 140.0 - 160.0 | (37) |
|  | 160.0 - 228.0 | (18) |

Map 25. Labour Market Dependency Ratio, *No migration* (NMI) simulation, 2050

## Labour Market Dependency Ratio 2050 - NMI Scenario



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### Labour Market Dependency Ratio in 2050 after DEMIFER Scenario "No Migration (NMI)"

|               |      |
|---------------|------|
| 40.0 - 80.0   | (41) |
| 80.0 - 100.0  | (65) |
| 100.0 - 120.0 | (73) |
| 120.0 - 140.0 | (56) |
| 140.0 - 160.0 | (27) |
| 160.0 - 243.0 | (25) |

Regional level: NUTS 2  
Source: ESPON 2013 Database, 2010  
Origin of data: Eurostat, NSIs, Estimations, 2010  
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## Appendix D. List of the data prepared within the reference scenarios

### 1. MULTIPOLES input data

- Population on 1 January 2005, by region, sex and 5-year age group (to 100+)
- *Status quo* (2005) demographic rates and labour force participation rates:
  - Mortality rates by region, sex and 5-year age group (to 100+)
  - Fertility rates by region and 5-year age group (15-49)
  - Internal out-migration rates by region, sex and 5-year age group (to 100+)
  - Emigration rates by region, sex and 5-year age-group (to 100+)
  - Percentage distribution of emigrants from each origin country among the destination countries (including the Rest of the world)
  - Distribution of immigrants to each country among the destination regions
  - Annual number of immigrants from the Rest of the world (i.e. from outside the 31 European countries) arriving to each country
  - Age distribution of immigrants from the Rest of the world, by destination country.
  - Share of males among the immigrants from the Rest of the world, by destination country.
  - Activity rates by region, sex and 5-year age group (15-75+).
- Specific *No extra-Europe migration* data
  - Emigration rates by region, sex and 5-year age-group (to 100+)
  - Percentage distribution of emigrants from each origin country among the destination countries

### 2. MULTIPOLES output files with the results of the reference projections

The following files are available for each of the three reference projections (*Status quo*, *No migration* and *No extra-Europe migration*):

- Total population by country and sex (total, males, females), 2005-2050.
- Total population by region and sex, 2005-2050.
- Total labour force (active population, composed of employed and unemployed) and labour force in four broad age groups (15-25 , 25-40, 40-65 and 65+), by country and sex (total, males, females), 2005-2050.
- Total labour force and labour force in four broad age groups (15-25 , 25-40, 40-65 and 65+) by region and sex, 2005-2050.
- Population by country, sex and 5-year age group, 2005-2050.
- Population by region, sex and 5-year age group, 2005-2050.
- Labour force by country, sex and 5-year age group (15-75+) , 2005-2050.
- Labour force by region, sex and 5-year age group (15-75+), 2005-2050.
- Labour force dependency ratios ODR, EODR and LMDR for all the countries, 2005-2050.
- Labour force dependency ratios ODR, EODR and LMDR for all the regions, 2005-2050.
- Population accounts for the countries by sex (males, females, total) and projection step, showing the values of initial and final population in each 5-year projection step (2005-2010 until 2045-2050) and the values of the components of population change (births, deaths, natural increase, immigration from the 31 ESPON countries, emigration to the 31 ESPON countries ,immigration from the Rest of the world, emigration to the Rest of the world, Net migration, total population change.
- Population accounts for the regions by sex (males, females, total) and projection step, showing the values of initial and final population in each 5-year projection step (2005-2010 until 2045-2050) and the values of the components of population change (births,

deaths, natural increase, internal in-migration, internal out-migration, immigration from the 31 ESPON countries, emigration to the 31 ESPON countries ,immigration from the Rest of the world, emigration to the Rest of the world, net migration, total population change).

