

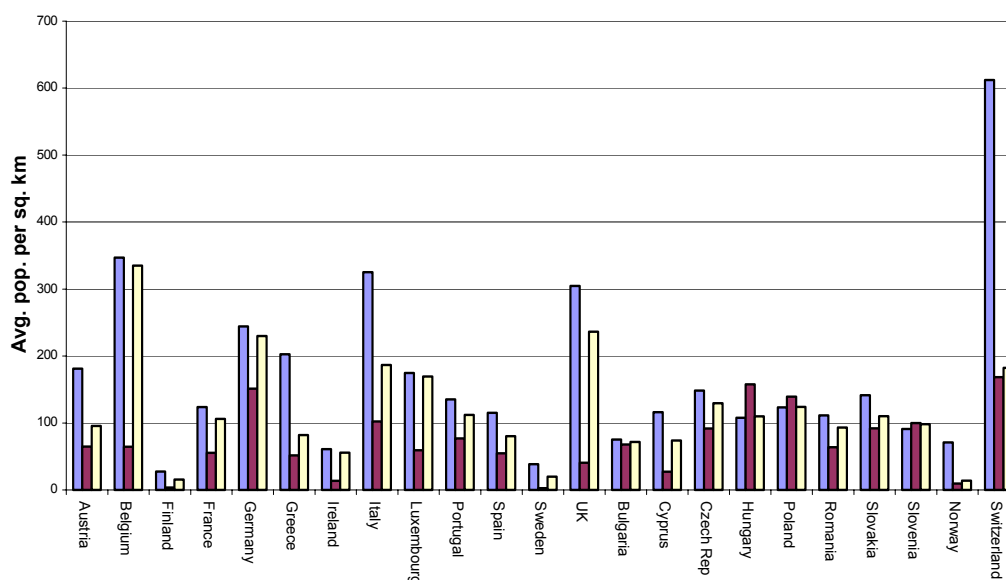
5. Demographic patterns and trends in mountain areas

In the mountainous countries of the EU15, the proportion living in mountain areas varies from 0.8% in Belgium to 49.8% in Austria; and in the mountainous applicant countries, from 5.8% in Poland to 64.9% in Slovenia. Switzerland has the highest proportion living in mountain areas: 84.2% (Table 3.3). These figures, however, are static, and do not show changes in population. Such trends need to be placed in national contexts. Consequently, the analyses presented in this chapter are of two types. The first contrast the demographic characteristics of the mountain and lowland parts of individual countries, and national averages. The second consider only the mountain areas of the study area. All available data are used in these analyses. Unfortunately, complete data sets are not available for all variables for a number of countries (see Annex 1).

5.1 Population density

As can be seen from Figure 5.1, in all of the current EU Member States, Norway, and Switzerland, the average population density is lower in mountain municipalities than in lowland municipalities or for the country as a whole. While this pattern is also true for some of the acceding and candidate countries, there are others where the reverse pattern is true, particularly in Hungary (where there are very few mountain municipalities), but also to a lesser extent in Poland and Slovenia. In Bulgaria, the average population density in lowland municipalities is only slightly higher than in mountain municipalities.

Figure 5.1. Average population density (purple=lowland, burgundy=mountain, cream=national)



Similar patterns are found from an analysis of the least and most densely settled municipalities. Considering the least densely settled municipalities, in almost every country with available data in the study area, these are more likely to be in mountain than lowland areas (Figure 5.2). For municipalities with less than 10 inhabitants per km², the only significant exception is Portugal (28.7% lowland, 13.5% mountain); and for municipalities with less than 50 inhabitants per km², the only significant exception is Poland (47.8%, 21.9%). The proportion of municipalities with less than 50 inhabitants per km² is similar for mountain and lowland areas in Portugal, Bulgaria, and the Czech Republic. At the other end of the scale, in only three countries is the proportion of municipalities with over 200 inhabitants per km² greater in the mountains: Hungary, Poland, and Slovenia (Figure 5.3).

Figure 5.2. Proportion of total area covered by municipalities with <50 inhabitants/km² (burgundy = area covered by municipalities with <10 inhabitants/km²)

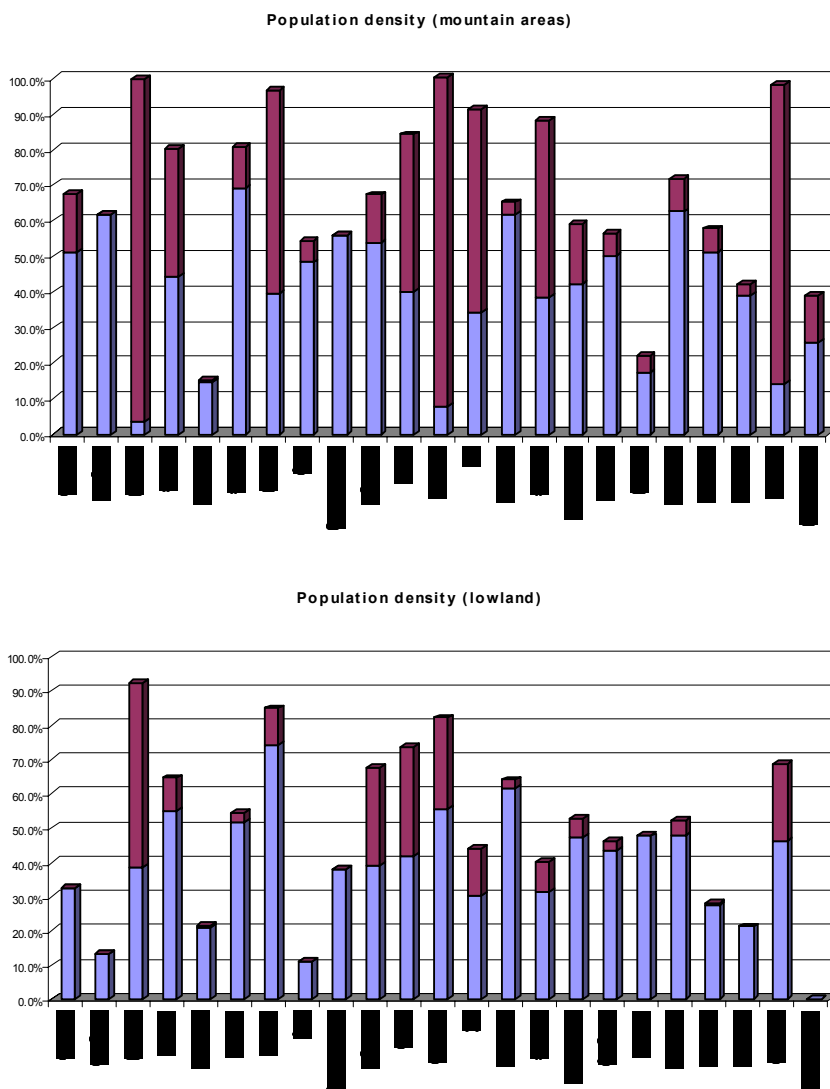
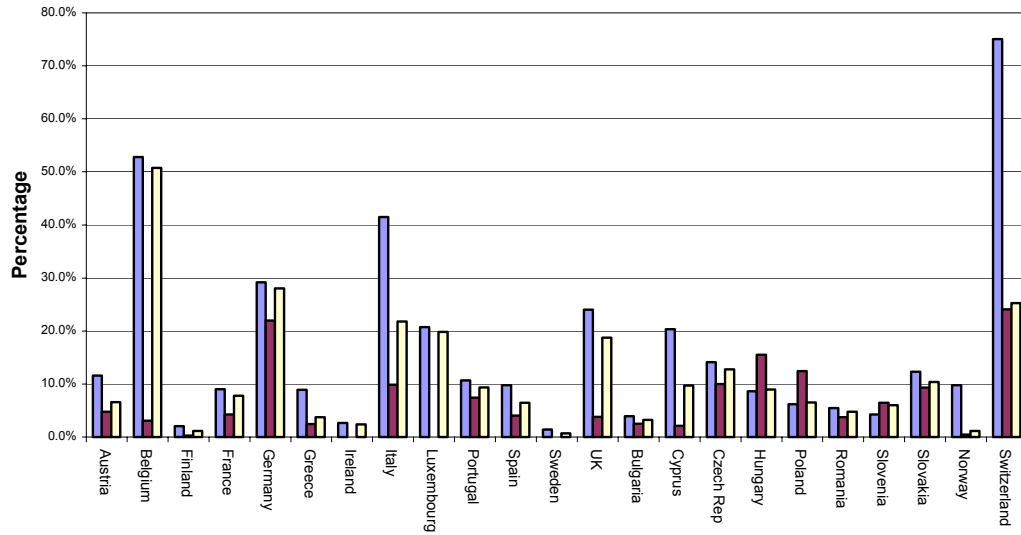


Figure 5.3. Proportion of total area covered by municipalities with over 200 inhabitants/km² (purple=lowland, burgundy=mountain, cream=national)



As shown in Figure 5.4, the massifs with the lowest population densities (less than 25 inhabitants/km²) are in the Nordic countries, Scotland, and Ireland, as well as the French Pyrenees, and a number of Spanish ranges. Other ranges with a density below 50 inhabitants/km² include Corsica and the Massif Central of France, the Spanish Pyrenees and other Spanish ranges, and many of the mountains of Bulgaria and Greece. Conversely, the highest densities (over 125 inhabitants/km²) are found in most of the mountains of Germany, the Basque Country and Catalunya in Spain, Sicily, the Swiss Jura and Mittelland, the Sudetes, the Polish mountains, northern Slovenia, western Bulgaria, and Evia-Viotia–Attiki (Greece). While many of these broad trends are also relevant when considering population densities at the municipality level, some other details can be seen, which are masked at the greater level of aggregation of massifs, where the large populations of urban centres greatly influence average values. Figure 5.5 shows, in particular, very low densities (less than 25 inhabitants/km²) in the inner Alps and the higher parts of the Romanian Carpathians, as well as those noted above.

Figure 5.4. Population density in mountain massifs

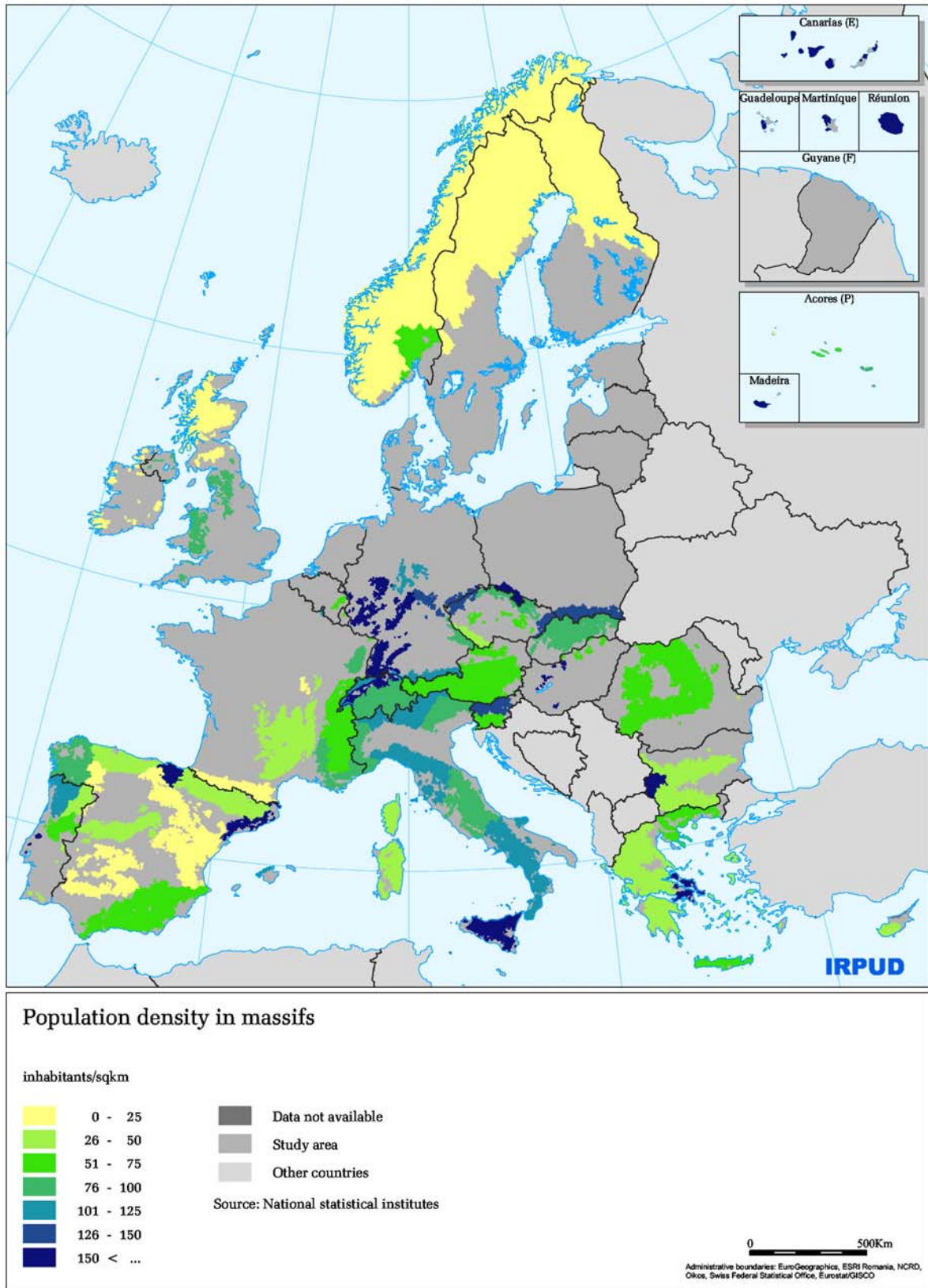
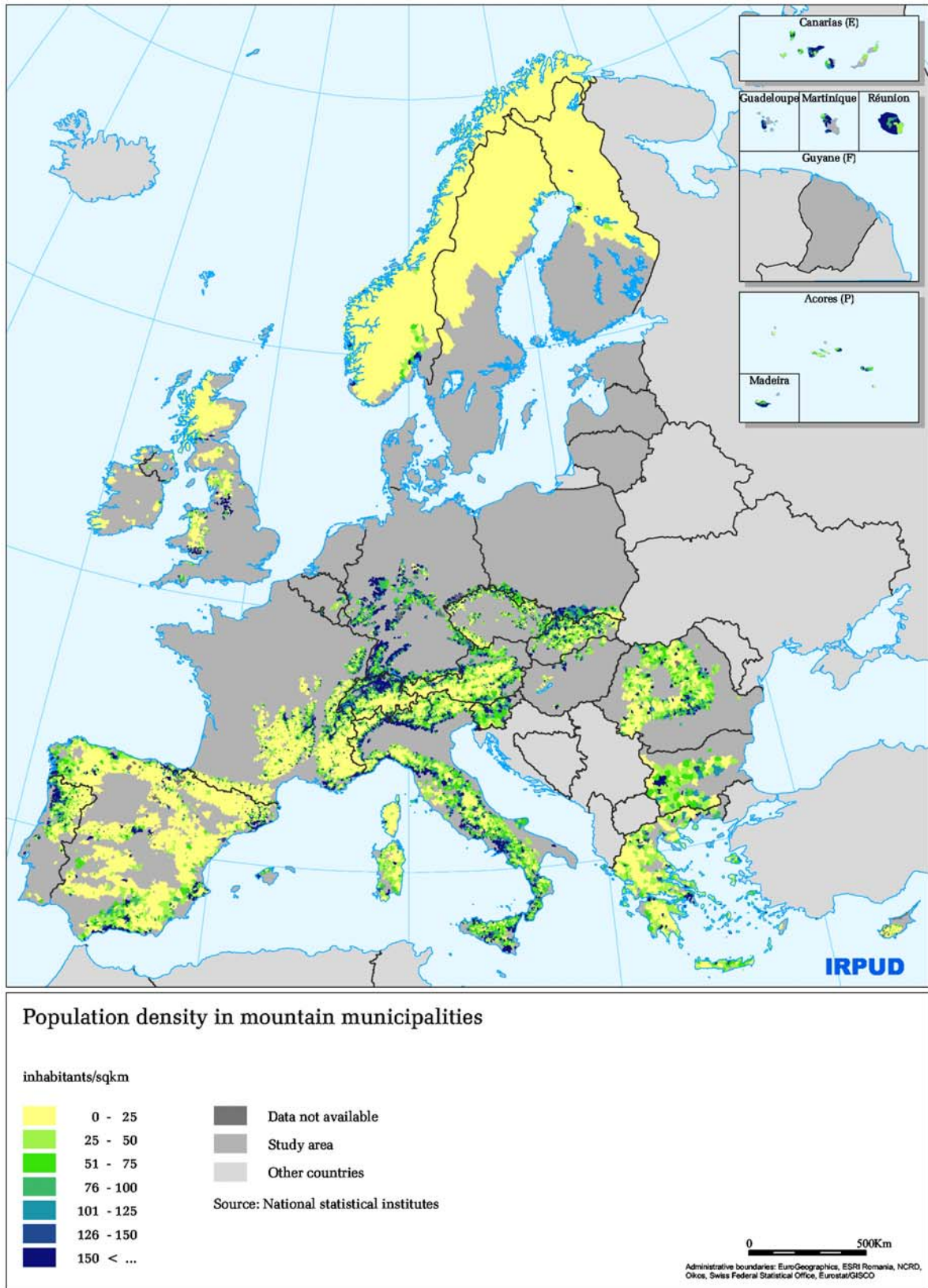


Figure 5.5. Population density in mountain municipalities



5.2 Age structure

A key concern with respect to the future of mountain areas is with regard to the age structure of their populations. As shown in Figure 5.6, the national proportion of the population under 15 varies considerably across the countries of the study area, from 14.6% in the Czech Republic and 14.8% in Bulgaria to 24.1% in Germany. The range of variation across current EU Member States is similar to that across the acceding and candidate countries. The proportion under 15 in mountain areas is similar to that in lowland areas with a few exceptions. In Switzerland, the proportion in mountain areas (17.5%) is considerably higher than in lowland areas (12.9%); this pattern is less marked in the Czech Republic (16.9%, 13.9%) and Poland (21.2%, 19.6%). In Cyprus, the proportion in lowland areas (21.6%) is somewhat higher than in mountain areas (19.8%). However, the large standard deviations mean that none of these differences is very significant at the national scale.

At the other end of the age spectrum, the national proportion of the population over 60 varies considerably across the countries of the study area, from 15.1% in Ireland and 15.3% in Germany to 23% in Greece (Figure 5.7). Again, the range of variation across current EU Member States is similar to that across the acceding and candidate countries. In nearly all countries, the proportion in mountain areas is either very similar or higher than in lowland areas: the greatest differences are in Cyprus (lowland 14.7%, mountain 23.4%), Ireland (15.0%, 18.4%) and Greece (21.9%, 24.0%). The opposite pattern is evident in Austria (21.6%, 20.5%) and Slovakia (16.8%, 15.7%). However, the standard deviations are generally even larger than for the population under 15, so that none of these differences appears very significant at the national scale. Nevertheless, the higher proportion of people over 60, combined with the problems of access discussed in Chapter 7, imply increasing demands on public services.

Figures 5.8 and 5.9 show the same data for mountain municipalities only. The greater detail of these maps provides better disaggregated information at the regional level. Figure 5.8 again shows the relatively high proportion under 15 in the mountains of Germany, and also in the Polish Tatras, western Austria, and parts of the Norwegian and Romanian mountains and Swiss Alps. Figure 5.9 shows that some mountain areas have significantly ageing populations, particularly in the Balkans (Bulgaria and Greece), northern Portugal, much of the Alps, and the mountains of France, the UK, Ireland, and the Nordic countries. Such characteristics pose major challenges for future development.

Figure 5.6. Percentage of population under 15: green = lowland, red = mountain, blue = national average

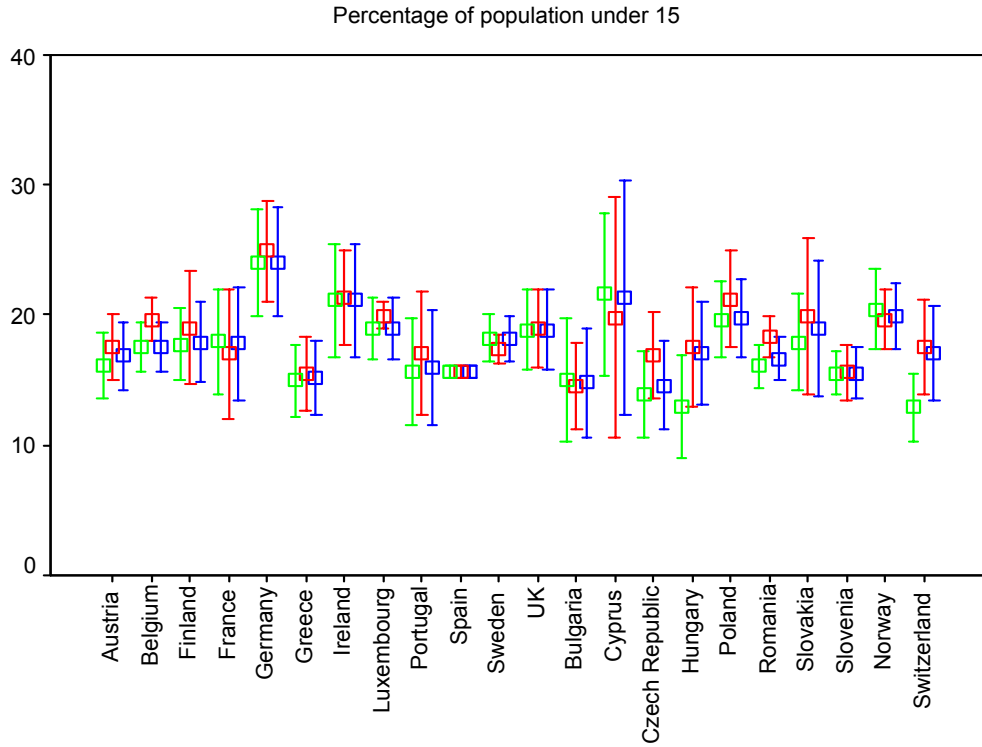


Figure 5.7. Percentage of population over 60: green = lowland, red = mountain, blue = national average

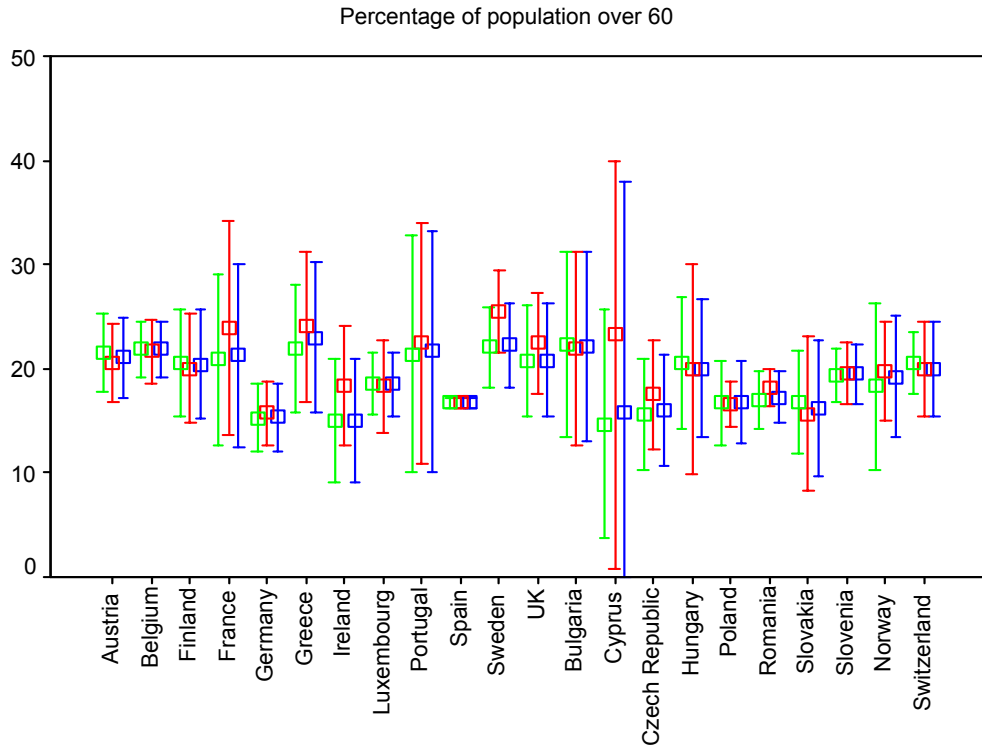


Figure 5.8. Proportion of inhabitants under 15 in mountainous municipalities

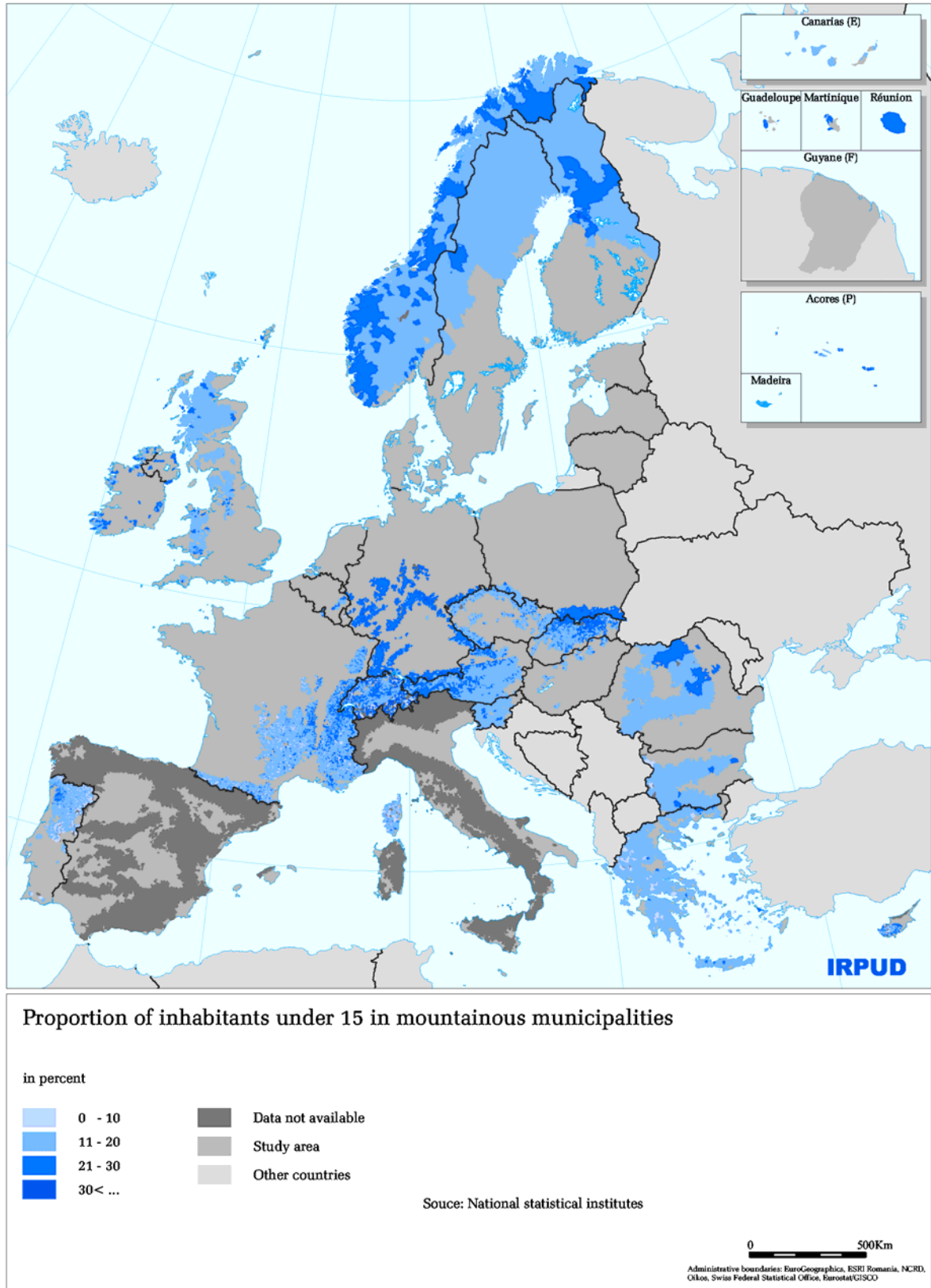
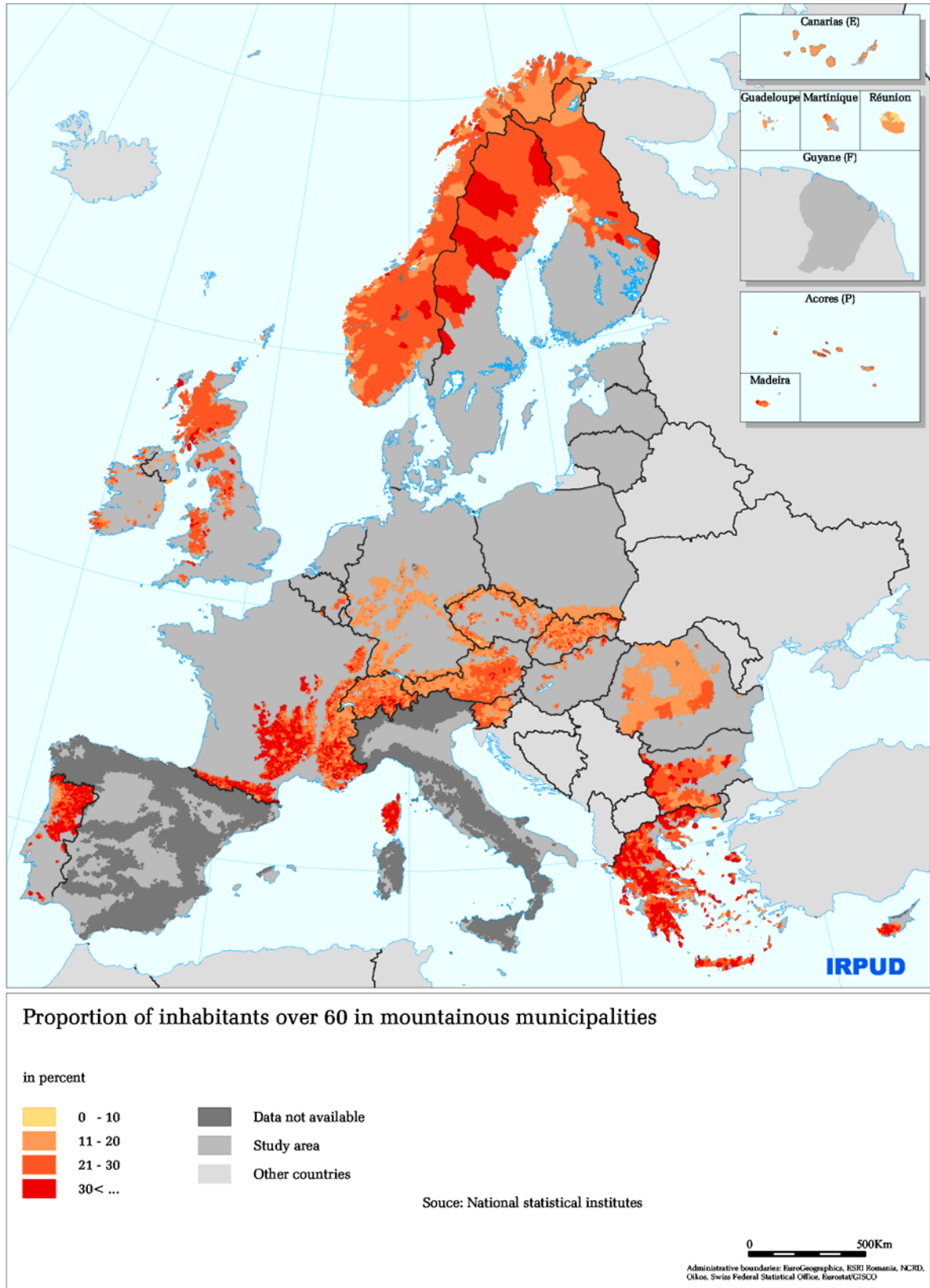


Figure 5.9. Proportion of inhabitants over 60 in mountainous municipalities



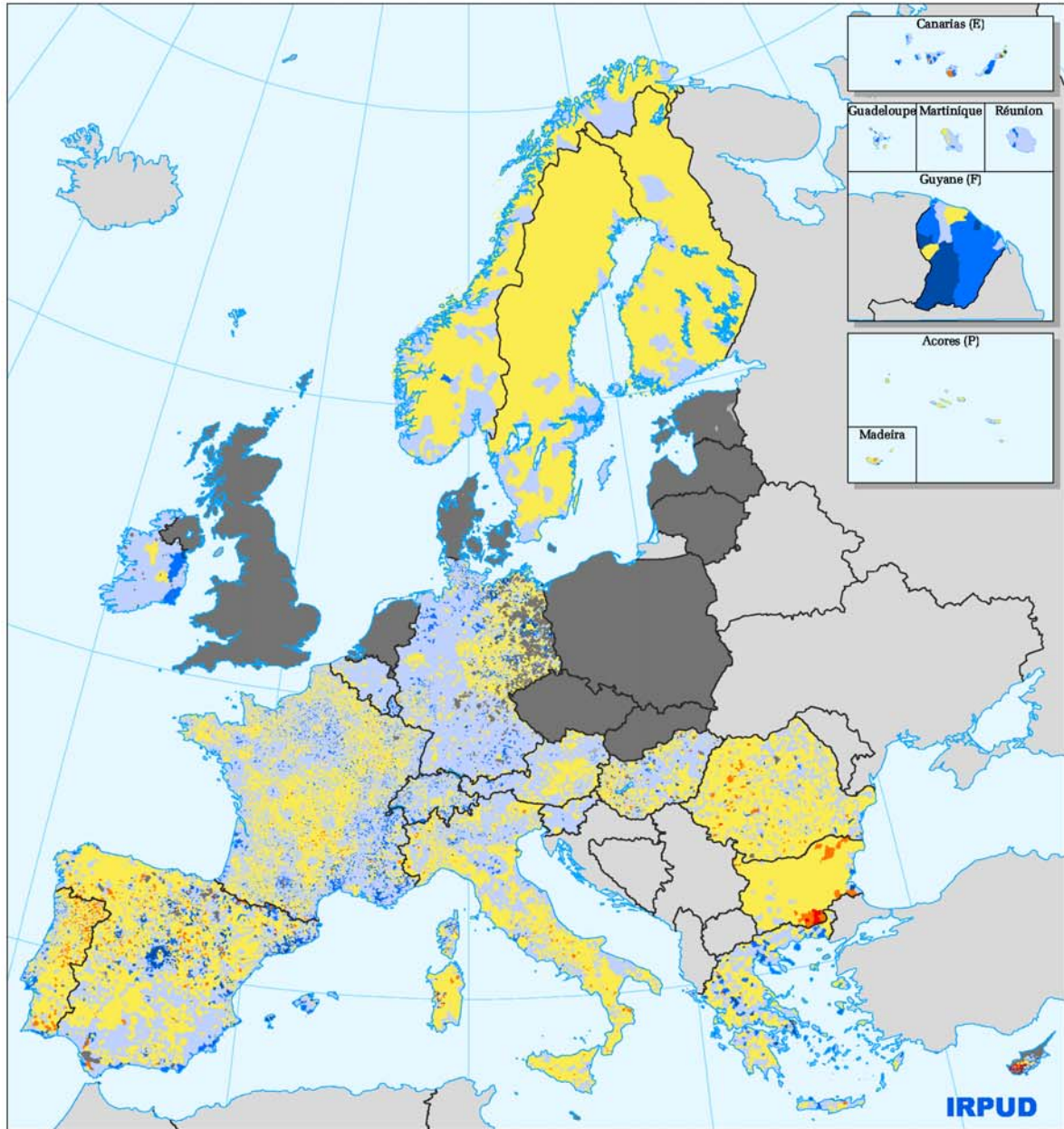
5.3 Demographic changes

The analyses presented above consider the current situation with respect to a number of key demographic variables. However, they need to be placed in context in both space and time. Consequently, this section addresses, first total changes in populations and then two elements of change: natural growth and outmigration. Unfortunately, the necessary data are not available for all countries at the municipality level needed for the requisite level of analysis.

Changes in total population for municipalities from 1991 to 2001 are shown for entire countries in Figure 5.10. This shows large decreases in population over much of Bulgaria, Finland, Norway, Portugal, Romania, and Sweden. However, it is only in Corsica, Sicily, and the central Apennines of Italy that any mountain range can be distinguished as having particularly high rates of depopulation. Nevertheless, as shown in Figure 5.11, for nearly all the countries for which data are available, rates of depopulation were higher in mountain areas (or their equivalents in the Nordic countries) than in lowland areas. The only real exceptions were the UK (England and Wales only: mountain 32.9%, lowland 37.7%) and Belgium (0%, 13.3%). In Bulgaria, France, Greece, and Switzerland, rates were similar. Differences were relatively small in Slovenia (20.6%, 15.2%), Germany (36.5%, 25.9%), Austria (37.6%, 29.2%), Spain (57.5%, 47.4%), and Romania (77.1%, 72.5%), and Portugal (76.8%, 65.5%). The most marked differences were in Cyprus (62.0%, 16.7%) and Norway (66.6%, 31.5%). Municipalities with depopulation over 10% were also more common in mountains than lowlands except in Germany (4.6%, 6.7%), the UK (England and Wales only: 26.4%, 34.6%), and Bulgaria (55.5%, 60.7%).

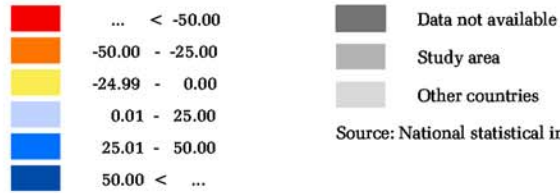
When only massifs are considered, as in Figure 5.12, the same trends visible in Figure 5.10 apply, and other areas of depopulation can also be seen, such as the Thuringer Wald (Germany), the eastern Austrian Alps, the French Pyrenees, and the Cantabrian mountains and GAP massif (Spain/Portugal). However, some areas of overall relative population growth can also be seen, in much of the French Alps, the mountains of Murcia (Spain), Slovenia, Switzerland, and western Austria (and the parts of Germany and Italy directly north and south).

Figure 5.10. Change in total population, 1991-2001, by municipality



Change in total population, 1991 - 2001 by municipality

in percent



Source: National statistical institutes

0 500Km

Administrative boundaries: EuroGeographics, ESRI Romania, NCRD, Oikos, Swiss Federal Statistical Office, Eurostat/GISCO

Figure 5.11. Proportion of total area covered by municipalities with depopulation 1991-2001 (burgundy colour=greater than 10% depopulation)

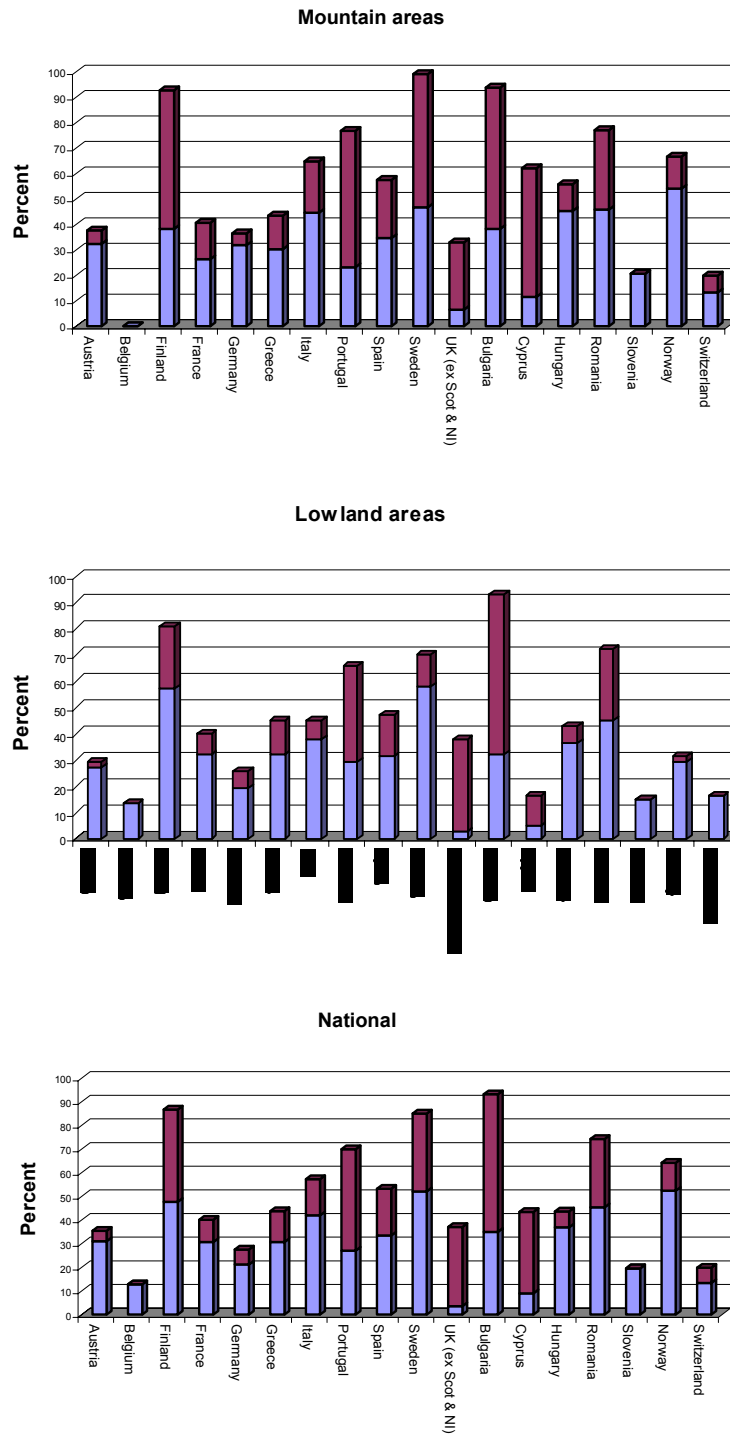
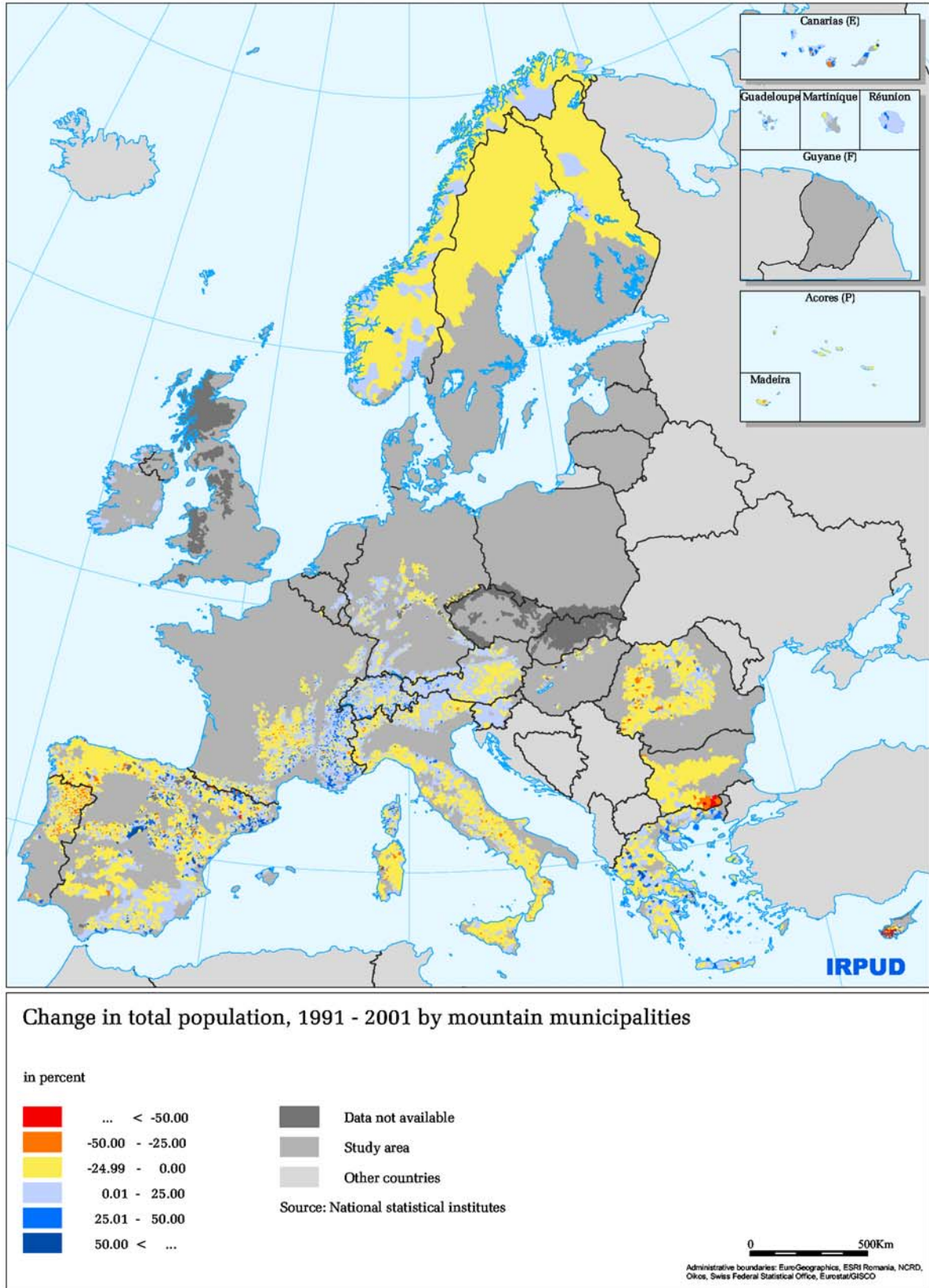
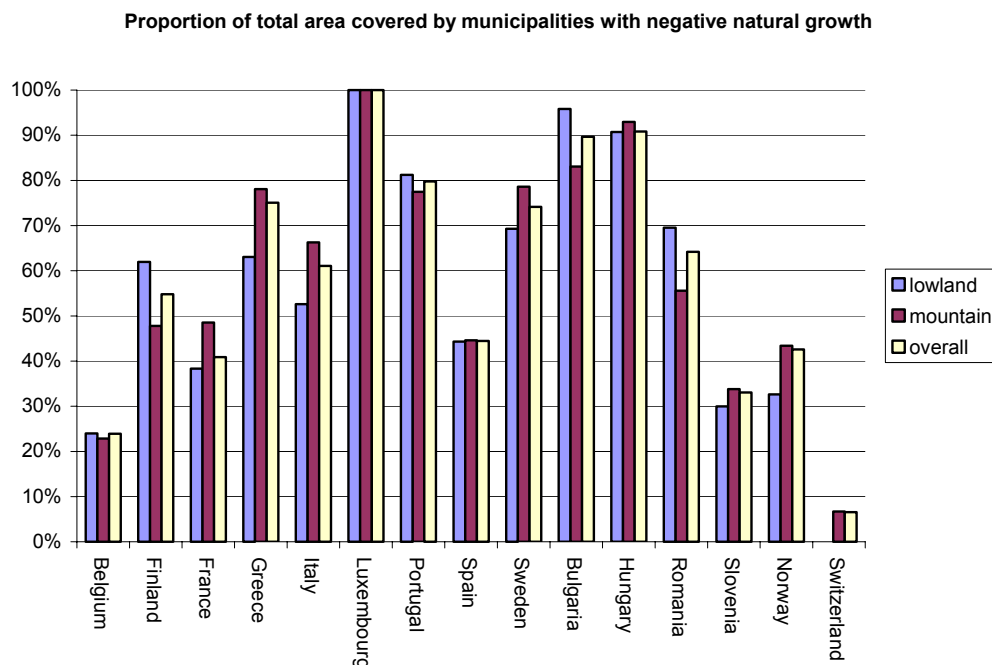


Figure 5.12. Change in total population, 1991-2001, in mountain municipalities



It is instructive to look at some of the elements of population loss and, again, to see whether these vary between mountain and lowland parts of individual countries. Such data are, unfortunately, only available for some countries. Figure 5.13 shows the proportion of the total area of municipalities characterised by negative natural growth (i.e., more deaths than births) from 1991 to 2001. In France (mountain 48.5%, lowland 38.3%), Norway (43.4%, 32.6%), Italy (66.3%, 52/6%), and Greece (78.1%, 63.1%), the proportion is at least 10% higher in mountain than lowland municipalities. In Finland (47.8%, 62.0%), Romania (55.6%, 69.5%), and Bulgaria (83.1%, 95.8%), the inverse is true. However, high rates of negative natural growth characterise all of these countries, and it would appear that these relationships are more a function of national trends than specifically related to mountain/lowland differences. Further work on this is needed.

Figure 5.13. Proportion of total area covered by municipalities with negative natural growth



A second cause of population loss is outmigration. Figure 5.14 shows the proportions of lowland and mountain areas covered by municipalities with outmigration. In most of the countries for which data area available, rates are at least 10% higher for mountain municipalities: the greatest differences are for Sweden (95.6%, 62.1%), Austria (mountain 70.2%, lowland 39.3%), and Norway (61.8%, 35.6%). Only in two countries is outmigration higher from lowland areas: France (31.1%, 37.6%) and Romania (75.9%, 79.2%). Considering only municipalities with at least 10% outmigration, only in Romania is this greater in lowland than mountain areas. Again, high rates of outmigration are found in many countries, and there are no clear patterns for different parts of Europe; more detailed work is needed to evaluate causes and effects of this significant phenomenon.

Finally, evaluating the interactions of different factors, and looking at trends within larger regions of Europe, Figure 5.15 compares changes in population from 1991 to 2001 with population densities in 2001. In both north and central Europe, the general trend is stable or positive; though there are some exceptions. In eastern Europe, depopulation is the norm. In the Mediterranean region, no clear pattern can be discerned. Figure 5.16 compares changes in population from 1991 to 2001 with the proportion of employment in the agricultural sector. The trends identified in the previous figure are more accentuated, but the proportion employed in agriculture does not appear to play a significant role. These findings suggest that very different processes of demographic change are taking place in different parts of the European mountains.

Figure 5.14 Proportion of total area covered by municipalities with outmigration, 1991-2001 (burgundy=greater than 10% outmigration)

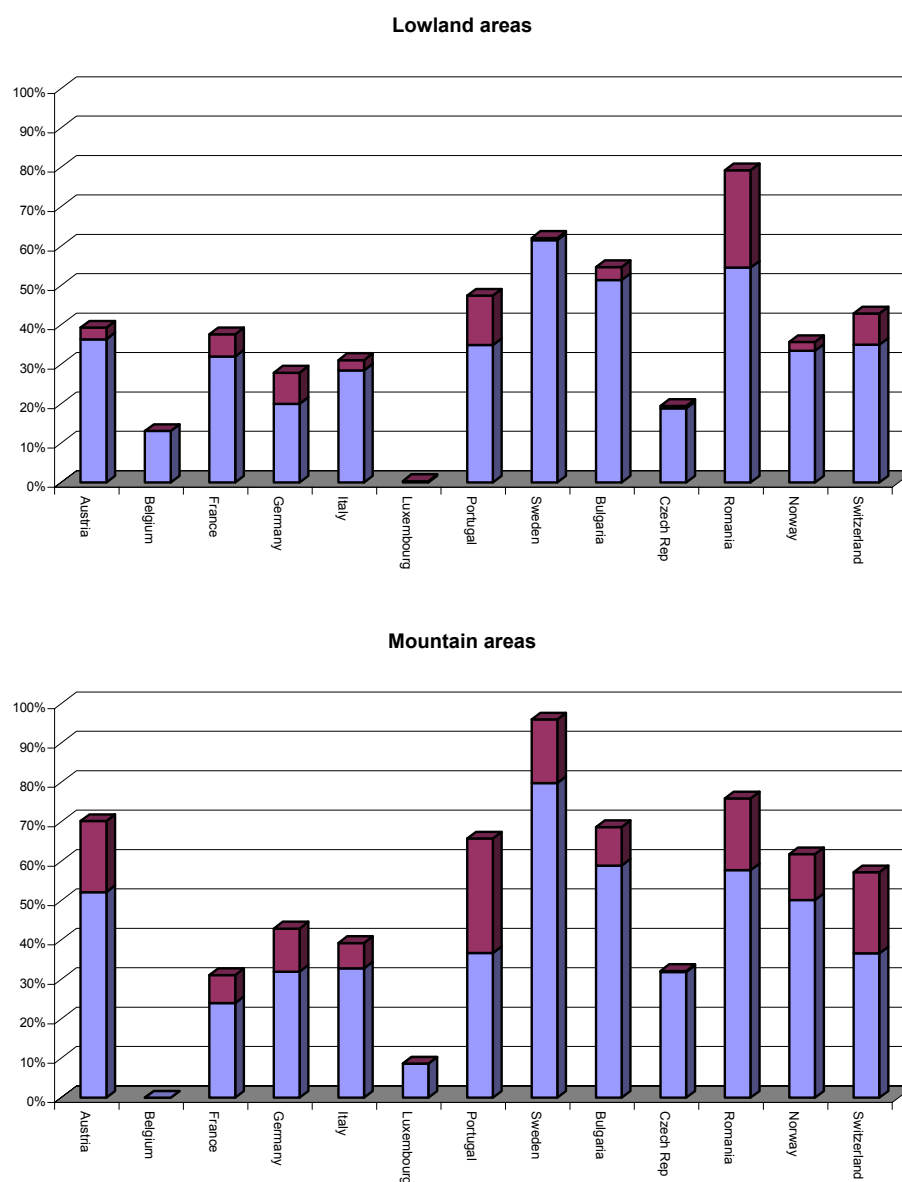


Figure 5.15. Change in population 1991-2001 and population density, 2001 per massif

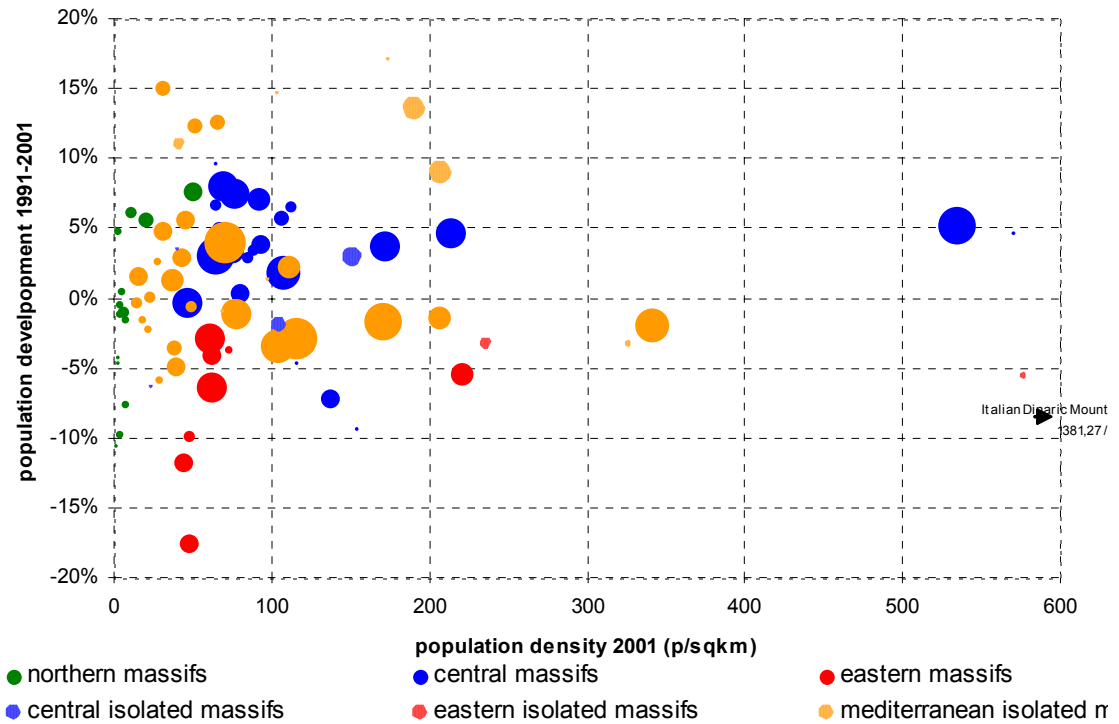


Figure 5.16. Change in population 1991-2001 and employment in agriculture per massif

