



# Health statistics

## Atlas on mortality in the European Union

### Chapter 3 General mortality

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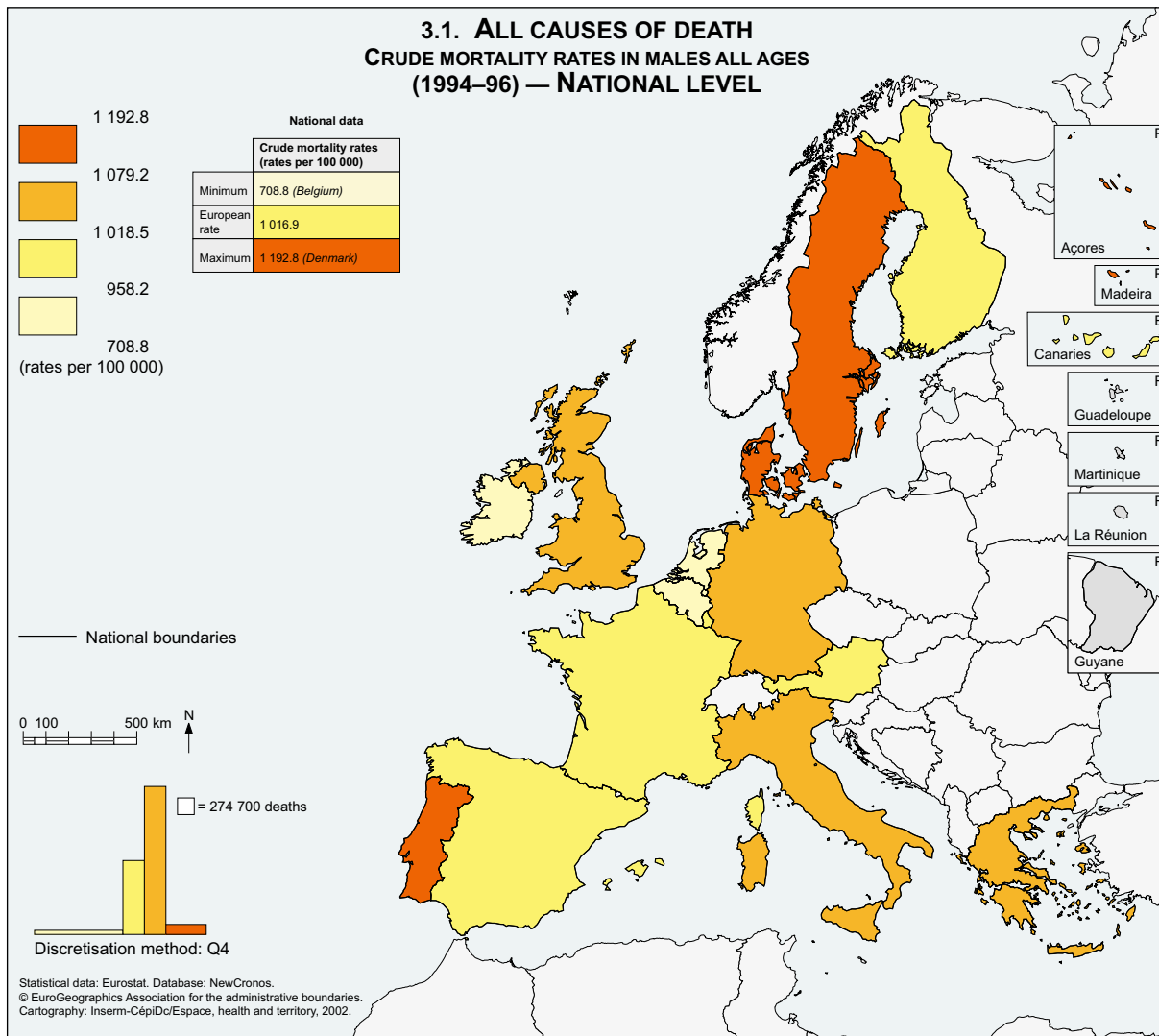
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### 3. General mortality



#### Crude rates mainly reveal European demographic structure

Crude mortality rates (not adjusted by age structures) highlight differences in the frequency of deaths in Europe. At national level, these rates vary at a ratio of 1 to 1.7 for both men and women. At regional level, the dispersion of the rates is more marked, varying at a ratio of 1 to 2.7.

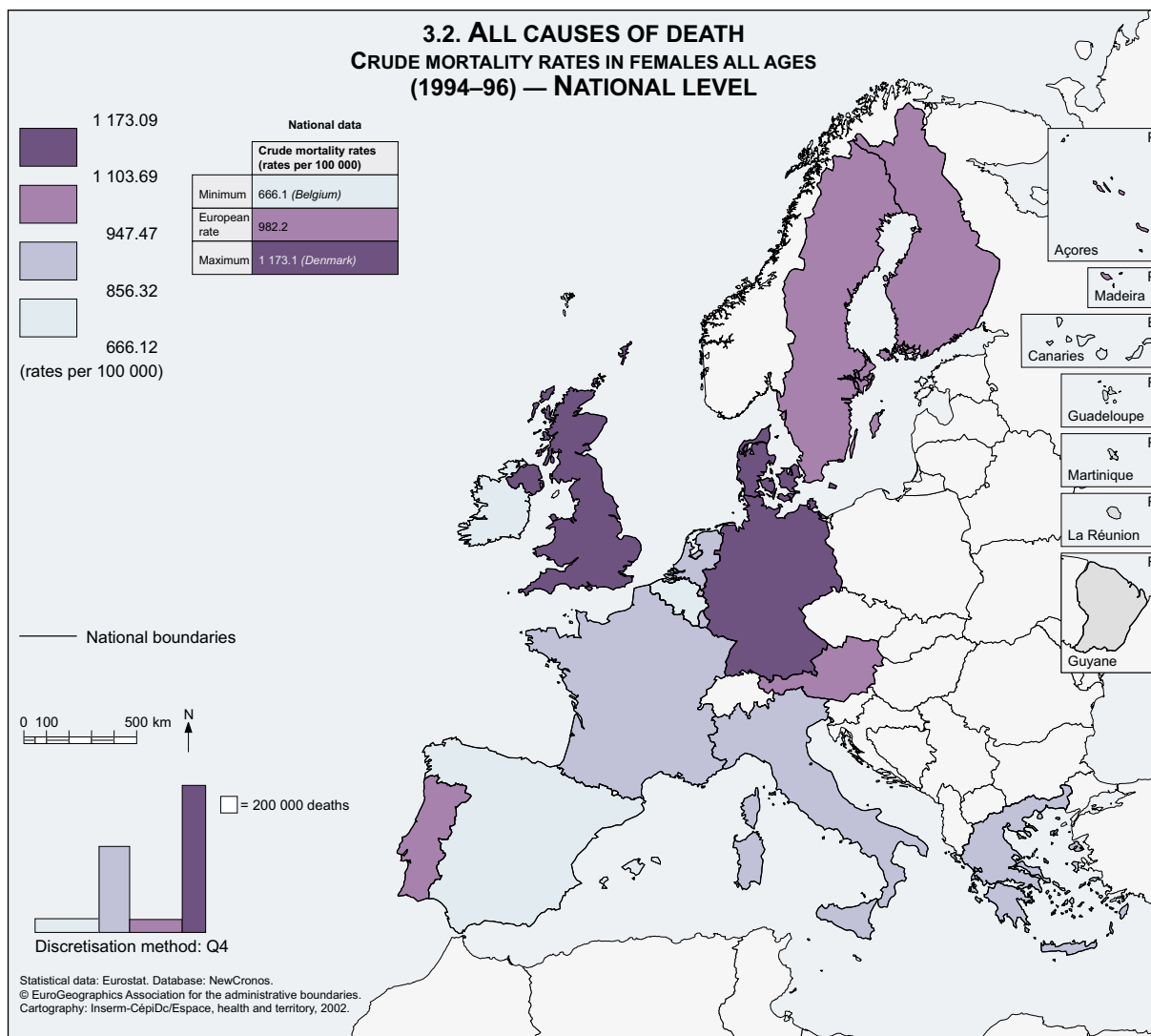
#### An old Europe and a young Europe

The number of deaths in each Member State is strongly correlated with the number of older people, since the mortality of people aged over 65 years accounts for two thirds of total mortality. The difference in the crude rates between Member

States is thus influenced more by the age differences of the populations than by the differences in risk of death for people of the same age.

Member States that are geographically, economically and culturally wide apart sometimes have the same crude death rates. These similarities are explained mainly by the demographic structures of the Member States.

The age pyramid of the European Community had a wide base in 1970, reflecting high birth rates. One in four Europeans was aged between 0 and 15 years. In 2000, this figure is only one in six. At the same time, the proportion of people aged over 65 years has increased, as a result of the downward trend in the birth rate and longer life

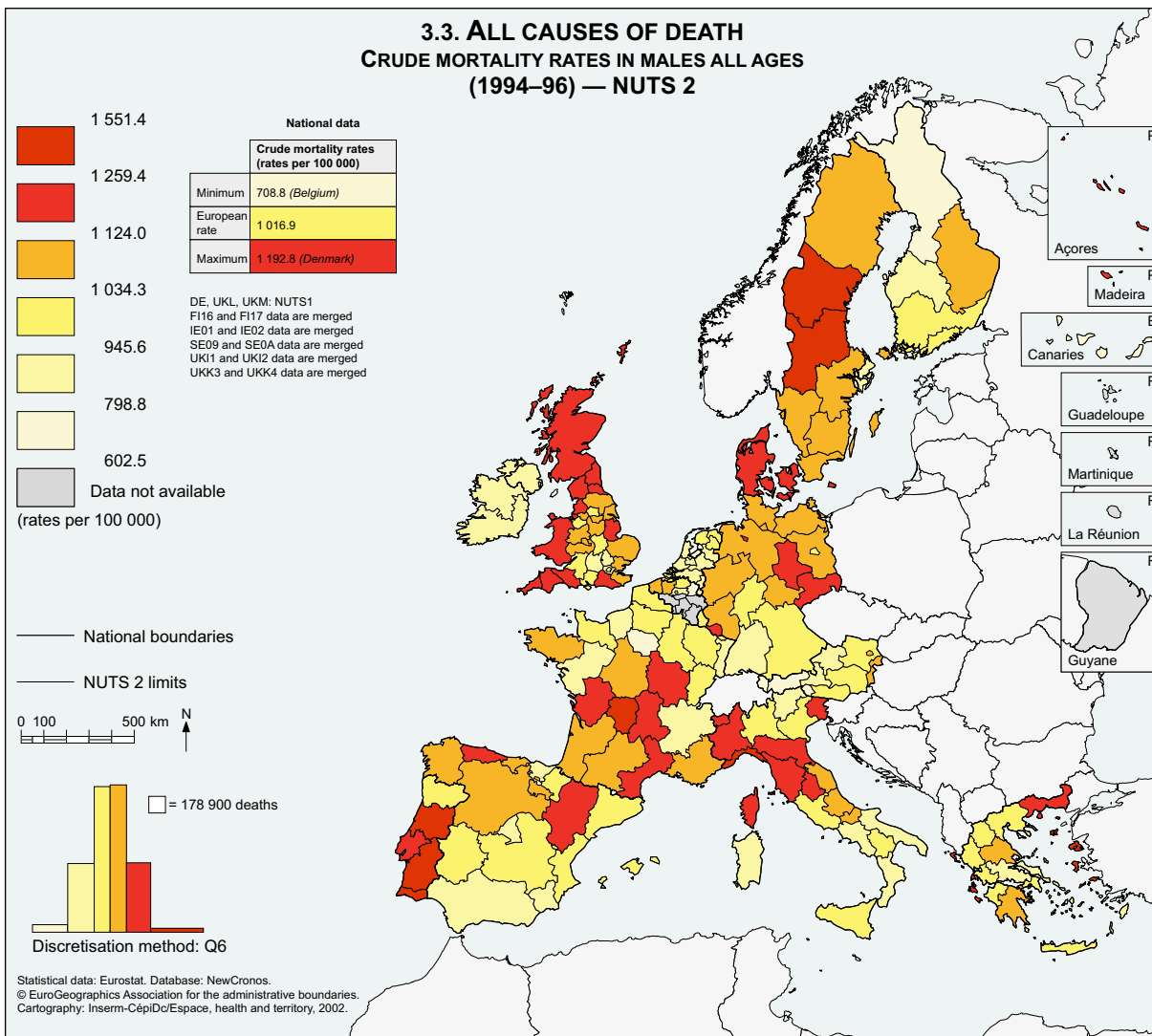


expectancy. Only Ireland, where the birth rate began to decline later, still has a high proportion of children and a low proportion of older people in its population. Its male and female crude mortality rates are therefore among the lowest in the EU.

The Member States with a high proportion of older people have the highest crude mortality rates. This is the case for Sweden, Italy, the United Kingdom, Germany and Greece. However, some Member States are exceptions to this rule. Death rates in Denmark and Portugal are well above the average even though they have some of the lowest percentages of older people in the EU. In contrast, France, Spain, and Belgium have low mortality rates and a high proportion of older people.

These exceptions show that the demographic structure alone cannot explain the level of the crude mortality rates of each country. In particular, the differences shown by the breakdown by sex in the maps reveal the influence of other factors.

An initial indicator for monitoring the effect of age structure is life expectancy. In the EU, the average life expectancy is 74 years for men and 80 years for women. Men have the highest life expectancy in Sweden. The fact that this country is unfavourably situated in terms of crude mortality rates is due to the high average age of its population. In contrast, the higher mortality rate for men in Portugal is in line with low life expectancy in relation with the rest of the EU.



### Marked sub-national contrasts

The geographical distribution at regional level of male and female crude mortality rates is like a patchwork.

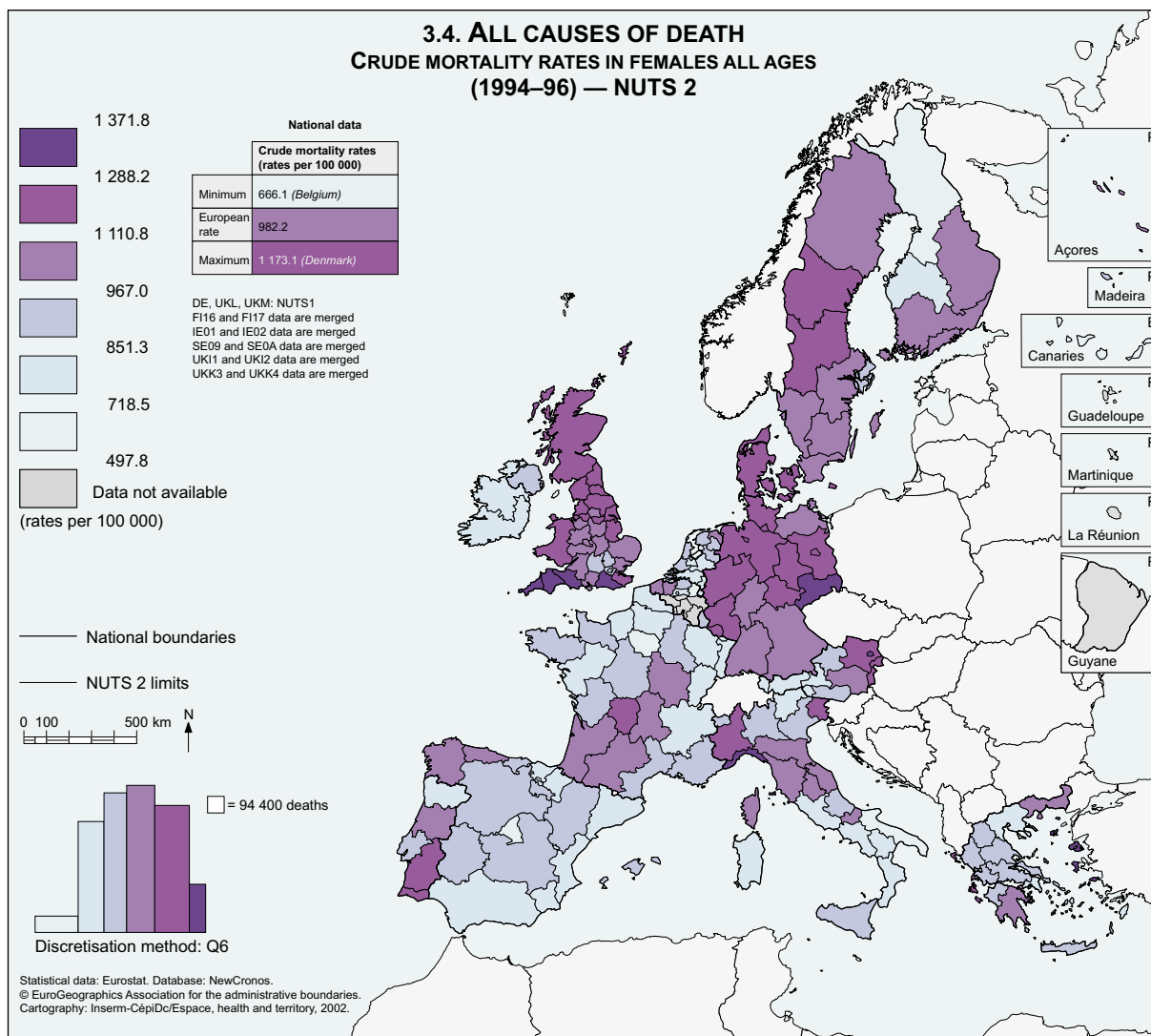
No Member State has homogeneous regional mortality rates except Ireland (but it is subdivided into only two regions).

The differences revealed within the Member States are again due mainly to regional demographic structures.

In France, for example, there is a north/south divide since the southern regions with the highest rates are predominantly rural regions where older people are over-represented in the population. Limousin, which is the most affected region, is the perfect ex-

ample. This difference also occurs in the United Kingdom, where there is a gradient from the regions near London with below-average mortality rates to the peripheral rural areas with higher rates. In Spain, the Comunidad de Madrid clearly appears as an urban zone with below-average mortality rates, as does the region of Stockholm in Sweden.

Some cross-border regions have comparable crude mortality rates. These continuities show that these regions have relatively similar demographic structures but do not enable us to conclude that they have similar mortality profiles. The maps showing age-standardised mortality also show that regions that are similar in terms of their crude mortality rates can present very considerable differences once the age effect has been checked.



### Age-standardised mortality rates reveal major differences in mortality in the EU

By checking the effect of the demographic structure, the age-standardised rates highlight geographical differences in the risk of death.

After age standardisation, the rates vary at a ratio of 1 to 2. The geographical pattern is very different from that portrayed by the crude rates. One example is Ireland, which had some of the highest crude rates and some of the lowest age-standardised rates, and another is Greece, where the situation is reversed.

There is widespread excess male mortality, with rates up to double those for women.

Despite these differences, the mortality rates in the worst affected regions are high for both men and women.

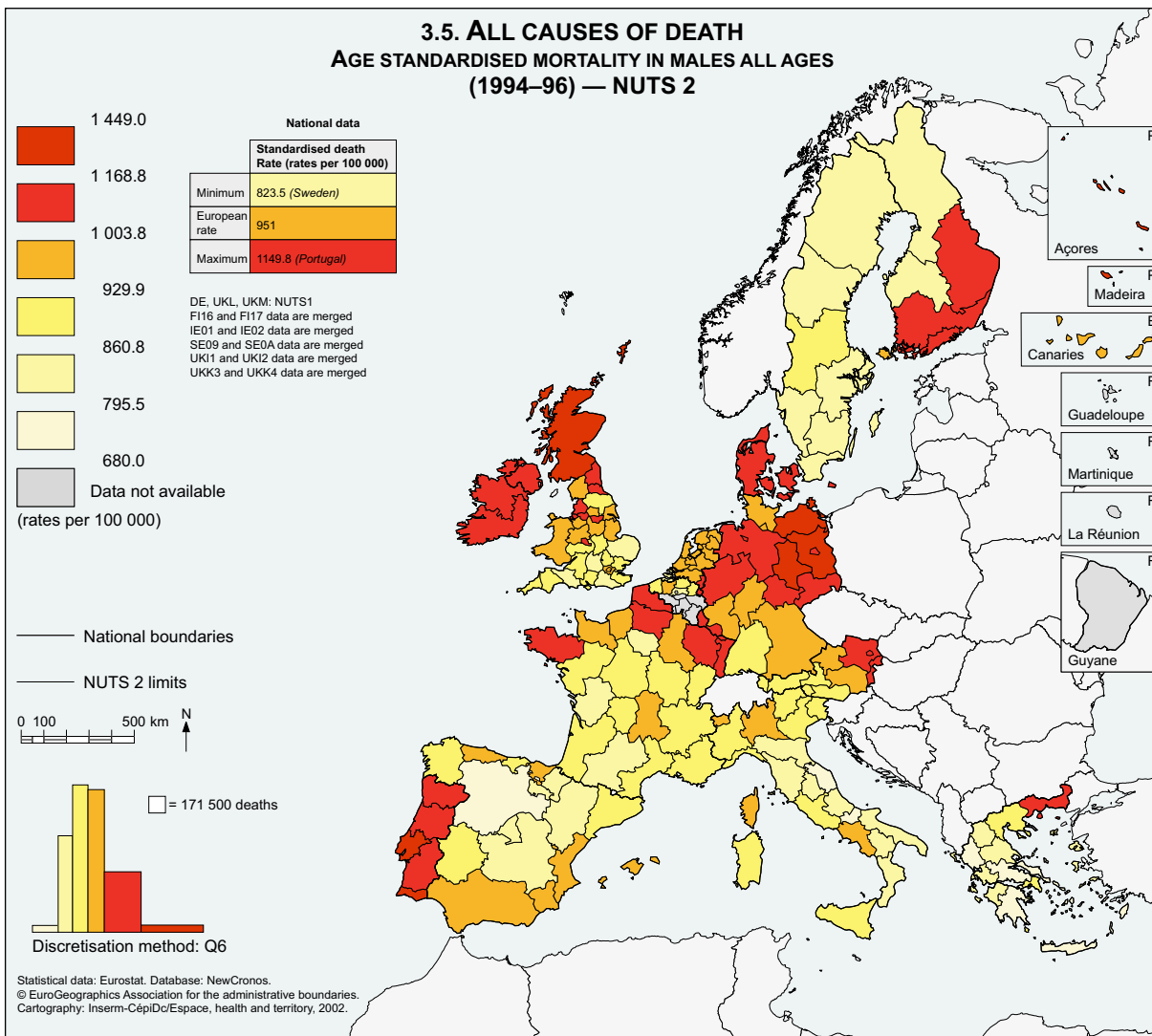
### Differences in mortality are caused by a combination of factors

The worst affected regions are often economically disadvantaged.

In France, the United Kingdom and Germany, there are high mortality rates for both men and women in the regions that were previously home to heavy industries but are now undergoing conversion, such as Nord-Pas-de-Calais, Lancashire, Yorkshire and Saarland.

The same goes for eastern Germany, Andalusia (ES) and Campania (IT), that are relatively poor in the context of their own countries and where there is currently very high unemployment.

However, the socioeconomic factor alone does not explain the level of mortality rates. There is not always a positive correlation between socioeconomic level and mortality level. Denmark, one of the richest Member States, is on a par with Portugal



and Ireland in terms of mortality. In contrast, overall mortality in Greece is lower than the average and at the same level as in Sweden.

Unlike the former industrial regions, Europe's mountainous regions (the Alps, Pyrenees, Peloponnese) are in a favourable situation.

Besides the socioeconomic and environmental factors, which often interact with each other, lifestyle is a very important factor underlying differences in mortality. Certain marked differences that show up in the maps relating to men and women confirm this. In France, for example, male mortality is high in all the northern regions, while female mortality is relatively low (except for Nord-Pas-de-Calais). This gap reflects differing risk behaviour (alcohol, tobacco, etc.) depending on sex and region.

Spatial differences in mortality can also reveal differences in the effectiveness of or access to health-care in the European Union.

### Widespread excess male mortality, but varying from one Member State to another

After the age structures were checked, the differences in mortality between men and women increased. The large proportion of older women in the European population explained the similarity between the female and male crude mortality rates. For people of the same age, the risks of death are considerably higher for men.

Although excess male mortality is widespread throughout the EU, the extent varies depending on the Member State. France has the highest excess male mortality, followed by Finland and Spain.

In contrast, Sweden, the United Kingdom, Denmark and Greece have relatively low ratios of excess male mortality.



3. General mortality

