



## UNECE Trends in Europe and North America 2005 - Environment

Available online at <http://www.unece.org/stats/trends2005/environment.htm>

### Air pollution

In western Europe, the amount of air pollution is naturally biggest in the countries with the biggest population and the largest economy. France, Germany, Italy, Spain and the United Kingdom have the highest emissions of air pollution, measured in absolute quantity. Sulphur dioxide (SO<sub>2</sub>) emissions were highest in Spain with 1 535 000 tonnes in 2000, as well as volatile organic compounds (VOC) with 2 444 000 tonnes. As for nitrogen oxides (NO<sub>x</sub>) and methane (CH<sub>4</sub>), Germany had the highest absolute emissions with 1 600 000 tonnes and 2 884 900 tonnes respectively. France contributed most to emissions of nitrous oxides (N<sub>2</sub>X) and carbon monoxide (CO), with 248 000 tonnes and 6 726 000 tonnes respectively. Turkey also contributes rather large quantities of air pollution, as does Poland in the central and eastern European region.

### CO<sub>2</sub> emissions

Carbon dioxide (CO<sub>2</sub>) is considered the main greenhouse gas as it is responsible for over half the enhancement of the greenhouse effect. The United States is by far the biggest polluter of CO<sub>2</sub> emissions in the ECE region. The combined CO<sub>2</sub> emissions of the European Union, other western Europe, central and eastern Europe and the Russian Federation are approximately equal to that of the United States (Table 10.3). Canada, Luxembourg and the United States are the only countries in the region with more than 15 tonnes of CO<sub>2</sub> emissions per capita, with the United States recording the highest figure at 20.6 tonnes per capita (Table 10.4 and country pages). The biggest source of CO<sub>2</sub> emissions is from electricity and heat production, often between 30-40%, but in several countries over 50% of the total emissions. Another substantial contributor in western Europe and North America is the transport sector. The transport sector's contribution is largest in Luxembourg with close to 60 percent, whereas it is smallest in the Netherlands and Turkey at around 17-18 percent.

### Agriculture and the environment

The possibility of cultivating land depends to a great extent on climatic conditions. Therefore, Nordic countries like Iceland, Canada, Norway, Finland and Sweden have a smaller proportion of their landmass under cultivation than for instance Denmark or Hungary. The highest percentage of cultivated land in the ECE region in 2000 was found in the Republic of Moldova (65 percent), Ukraine (55), Denmark (53) and Hungary (52). The highest percentage of irrigated land in the ECE region, though, was in Azerbaijan, with 17 percent of the total land area being irrigated for agriculture. Also, in 2000, the Netherlands, Albania, Greece, Romania, Denmark, Armenia and Uzbekistan had a relatively high proportion of irrigation, at more than 10 percent of total land area. Iceland stands out by far as the country who uses the most fertilizers in relation to the cultivated land area, 3 000 tons per 1 000 hectares of cultivated land. Most of western Europe uses fertilizers rather intensively, as in Slovenia and Israel.

### Forest resources

In 2000, the Russian Federation had by far the largest area with forest cover in the ECE region. The Russian Federation has more than 7 times more forest cover than the European Union and almost double the combined forest area of Canada and the United States. Also, with regard to the extent of natural forest, the Russian Federation is in a league of its own. Not surprisingly, the Russian Federation also has the largest average area affected by forest fires, with an annual average between 1990 and 2000 of approximately 800 000 hectares, larger than the total forest area of Belgium. Canada is another country with vast forests and the highest share per capita – close to 8 ha of forest per inhabitant. Canada also has a relatively large forest area affected by fire with an annual average of approximately 500 000 hectares (Table 10.7). With the extensive use of forest plantation, the total forest area has grown between 1990 and 2000 in most countries of the region. The United States has the highest annual average increase of 388 000 hectares of forest area. In contrast, Albania has had a negative development in terms of forest coverage, with an annual average loss of 8 000 hectares of forest.

### Nationally protected areas

The proportion of total land area designated as nationally protected areas varies across the region. Liechtenstein (38.8 percent) and Germany (31.1) have the highest shares, but also Austria (26.4) and Monaco (25.6) have more than one quarter of the total land as nationally protected areas.