

Environment

Emissions to air

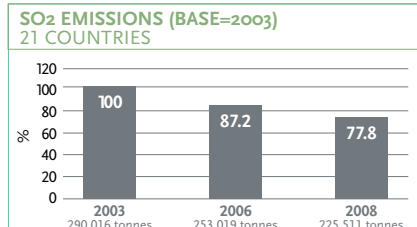
Emissions of greenhouse gases (GHG)

Carbon dioxide, nitrous oxide and the hydrogen fluorocarbons (HFCs) are the three major gases with global warming potential (GWP) listed in the Kyoto Protocol that are emitted by the chemical industry in Europe. Carbon dioxide with a GWP of 1 is released primarily from the burning of fossil fuels as energy sources.

Also taken into account are the carbon dioxide emissions associated with purchased electricity consumption. 23 national associations (four more than last year) reported a total of 189.9m tonnes of CO₂ emissions for 2008. 13 organizations reported a total of 24.5m tonnes of nitrous oxides (in CO₂ equivalents) and seven provided data on HFCs (0.8m tonnes in CO₂ equivalents).

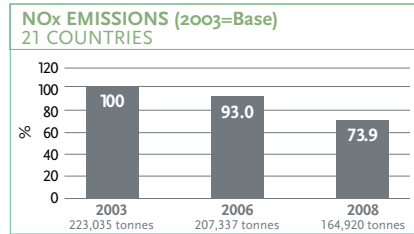
Sulphur dioxide (SO₂)

Sulphur dioxide contributes to atmospheric acidification, the main contributors being combustion plants and refineries. For 2008, our matched sample of 21 countries shows a reduction of 4.3% since 2007 and a total reduction of 22.2% since 2003, the baseline year.



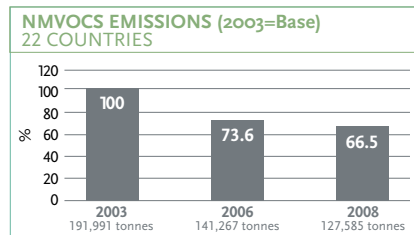
Nitrogen oxides (NO_x)

NO_x gases contribute to atmospheric acidification and have the potential to contribute to photochemical ozone creation. Our matched sample of 21 countries shows a significant reduction of 9.4% since 2007 and a total reduction of 26.1% since 2003, the baseline year.



Non-methane volatile organic compounds (NMVOCs)

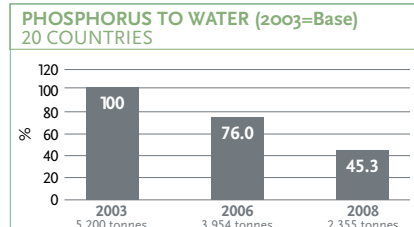
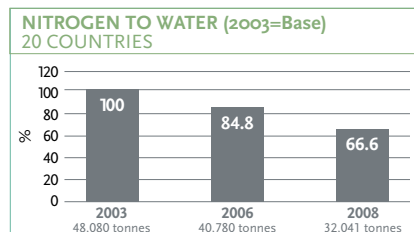
NMVOCs reflect the potential for photochemical ozone creation that is implicated in respiratory problems and ecological damage to plants. The matched sample (22 countries) for 2008 shows a slight increase of 2.7% since 2007 but an improvement of 33.5% since 2003.



Emissions to water

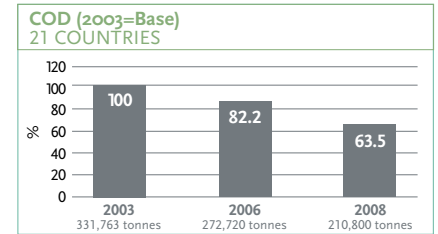
Nitrogen and phosphorus

Release of these two elements into water can result in eutrophication. Chemicals are a major source of these emissions. In our matched samples of 20 countries, 2008 nitrogen emissions to water are down by 18.7% since the year before and 33.4% since 2003. Phosphorus emissions decreased in 2008 by 26.6% since 2007 and by 54.7% since 2003.



Chemical Oxygen Demand (COD)

COD is the potential of chemical emissions to water to remove dissolved oxygen that would otherwise support fish and other aquatic life. In our matched sample from 21 countries the 2008 emissions show a reduction of 17% since 2007 and 36.5% compared to 2003.



Wastes

Hazardous and non-hazardous wastes

The total tonnages of hazardous wastes reported by 20 countries in 2008 show a reduction of 1.7% compared to 2004; the non-hazardous wastes decreased by 2.3% compared to 2004.

