

Sustainable Development

Total greenhouse gas emissions in the EU chemicals industry

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2. International Trade
3. Growth and Competitiveness
4. Employment
5. Energy
6. Investment and R&D
7. Sustainable Development

Total greenhouse gas emissions in the EU chemicals industry

Greenhouse gas emissions, energy consumption and production in the EU chemicals industry

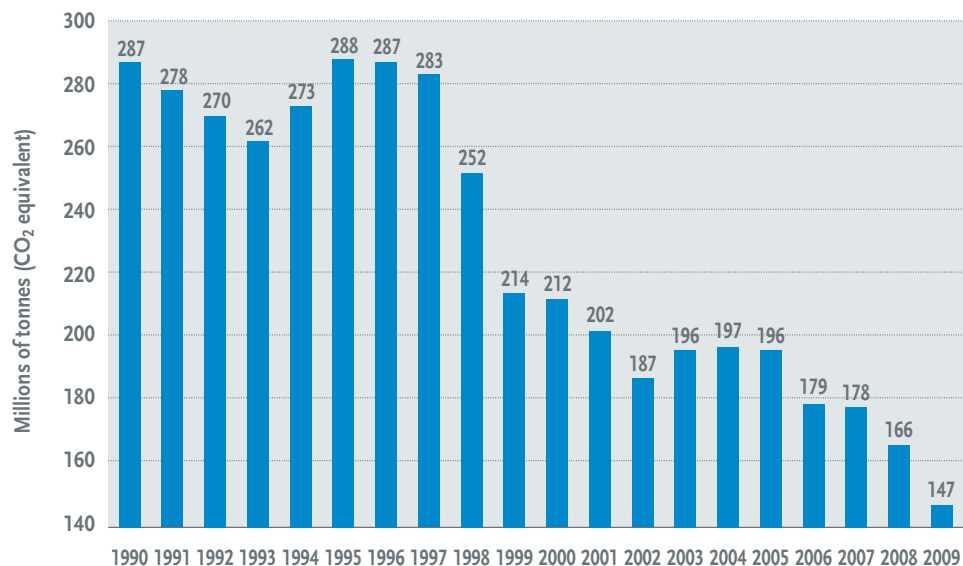
Greenhouse gas emissions per unit of energy consumption and per unit of production in the EU chemicals industry

Greenhouse gas emissions per production: European Union versus United States

Safety at work – EU chemicals sector incidence rate of accidents (more than three days lost)

Incidence rate of accidents at work (more than three days lost)

Safety at work – incidence rate of accidents at work in the EU manufacturing sector (2005)



Sources: European Environment Agency (EEA) and Cefic Chemdata International

Unless specified, chemicals industry excludes pharmaceuticals
Unless specified, EU refers to EU-27

Total greenhouse gas emissions from the EU chemicals industry have fallen by 49 per cent since 1990

- According to the European Environmental Agency (EEA), the European chemicals industry, including pharmaceuticals, emitted in 2009 a total of 147.4 million tonnes of CO₂ equivalent, down from 286.8 million tonnes in 1990.
- Long-term data show that the EU chemicals industry, including pharmaceuticals, has significantly reduced its greenhouse gas (GHG) emissions on a consistent basis from 1990 to 2009.
- Total greenhouse gas emissions in the EU chemicals industry have fallen by 49 per cent since 1990. This historic trend clearly represents successful efforts made by the chemicals industry to reduce emissions.

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Greenhouse gas emissions, energy consumption and production in the EU chemicals industry*

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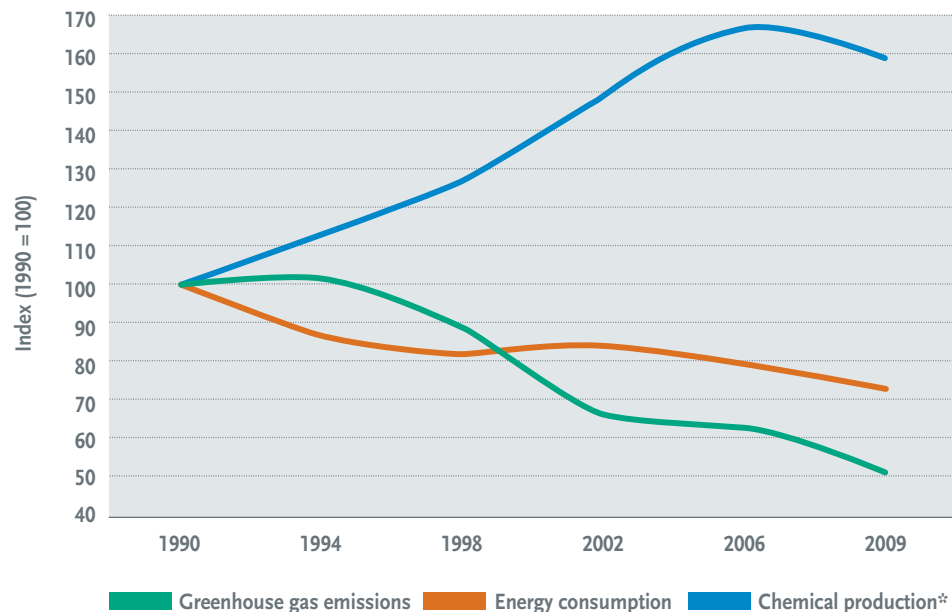
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Chemicals production decoupled from energy use

- Between 1990 and 2009, production in the EU chemicals industry, including pharmaceuticals, rose by 60 per cent, while total energy consumption and greenhouse gas (GHG) emissions fell by 27 per cent and 49 per cent respectively during the past years 1990 to 2009.
- The chemicals industry works to develop cleaner and safer technologies, waste recycling processes and new products to safeguard the environment including biotechnology processes, catalysts, membranes and desulphurisation. One aspect is increased energy efficiency. Besides increasing the energy efficiency of its own processes, the chemicals industry also helps to increase the energy efficiency of downstream users and their products through innovative inputs.

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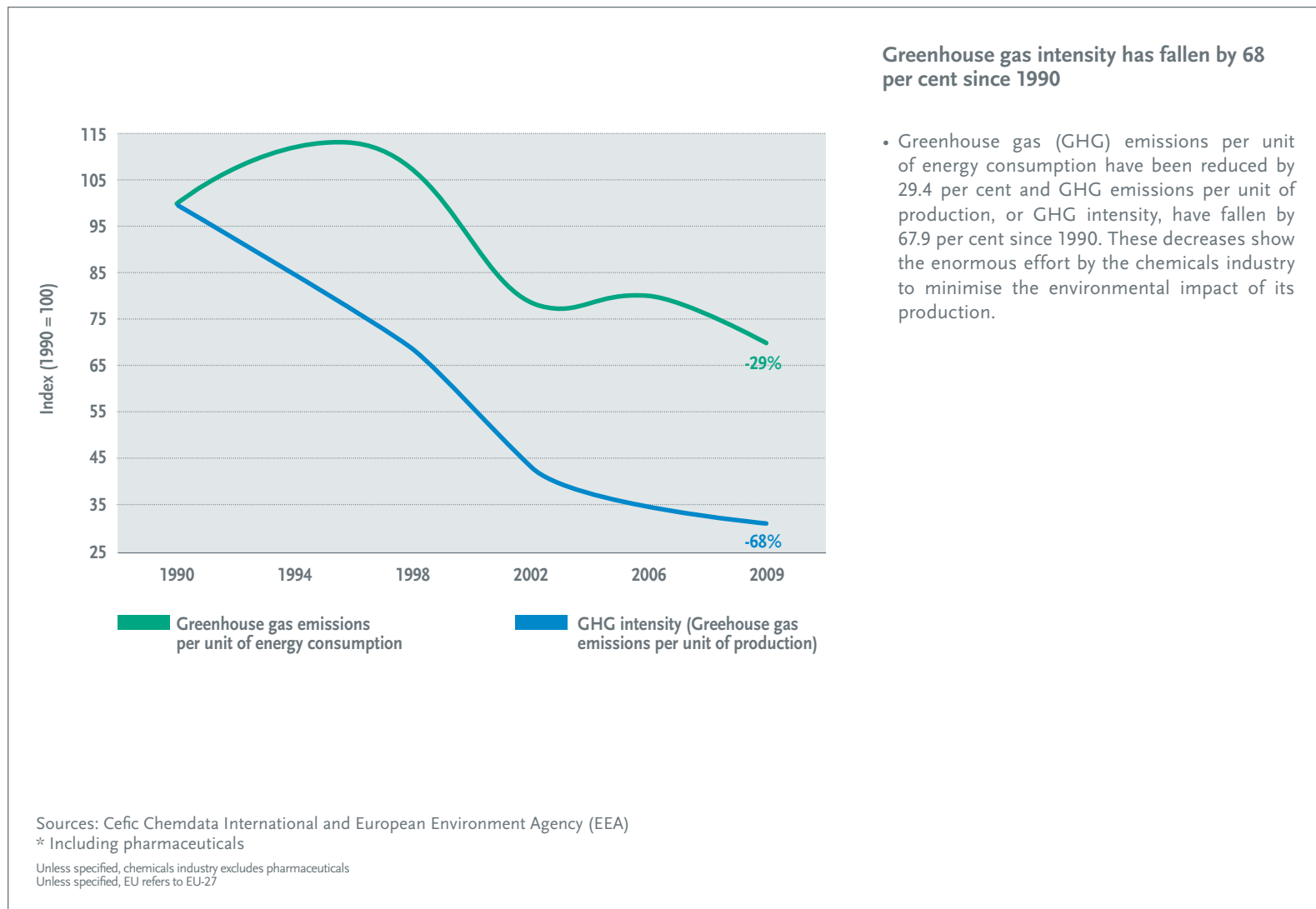
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Greenhouse gas emissions per production*: European Union versus United States

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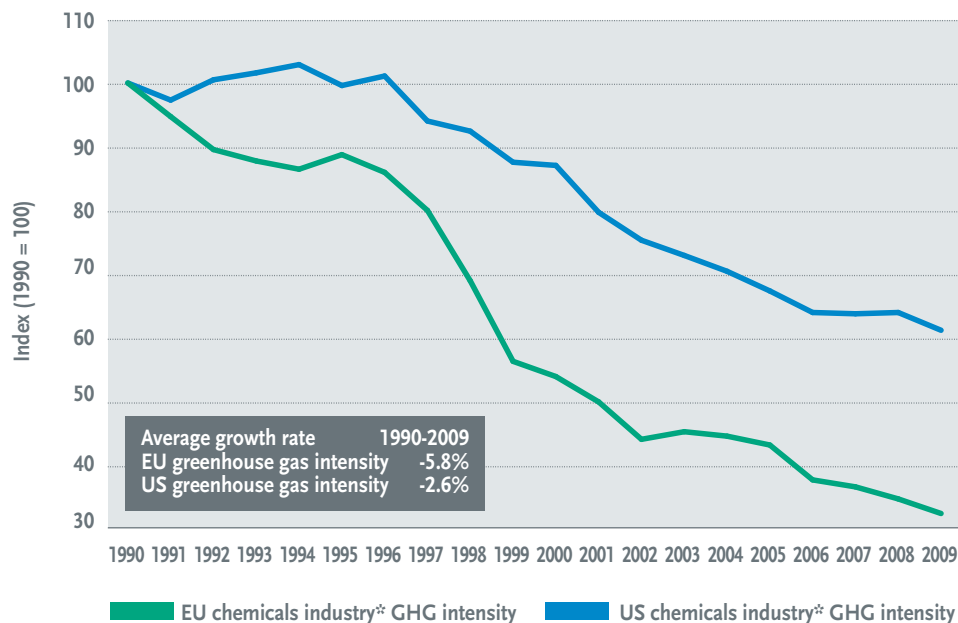
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Greenhouse gas intensity is higher in the European Union than in the United States

- In comparison to the US chemicals industry, the EU chemicals sector has reduced its greenhouse gas (GHG) emission intensity, calculated as emissions per unit of production, by a relatively greater amount and is comparably more GHG emission efficient.
- The US chemicals industry has decreased its emission intensity by 39 per cent since 1990, whereas the EU chemicals industry has cut its GHG emissions by 67.9 per cent.

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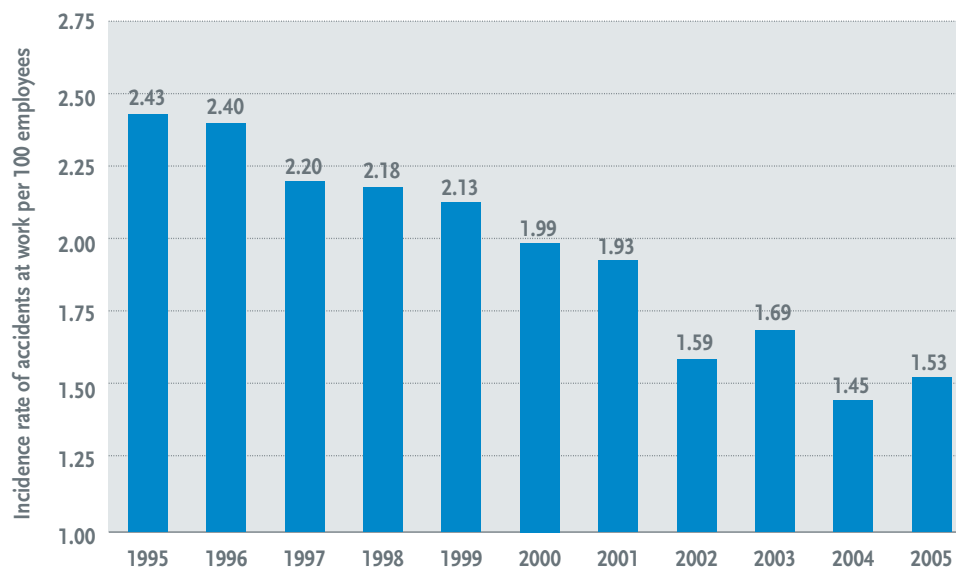
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Sources: Eurostat (health_safety_work) database and Cefic analysis

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Incidence rate dropped by more than one third from 1995 to 2005

- The incidence rate of accidents at work has fallen in the EU-15 chemicals industry from 2.43 in 1995 to 1.53 in 2005 (latest data available). Safety at work has been considerably improved from 1995 to 2005.
- The long-term data on safety at work show clearly that the EU-15 chemicals industry, including pharmaceuticals, has constantly reduced the number of accidents at work during the years 1990 to 2009.
- An accident at work is “a discrete occurrence in the course of work which leads to physical or mental harm”. The data include only accidents involving more than three calendar days of absence from work, also called ‘serious accidents’. The incidence rate of serious accidents at work is the number of people involved in accidents at work with more than three days’ absence per 100,000 people in employment (Source: European Commission).
- The harmonised data on accidents at work are collected by the EU Commission in the framework of the European Statistics on Accidents at Work, or ESAW, on the basis of a methodology developed in 1990.

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Incidence rate of accidents at work (more than three days lost)

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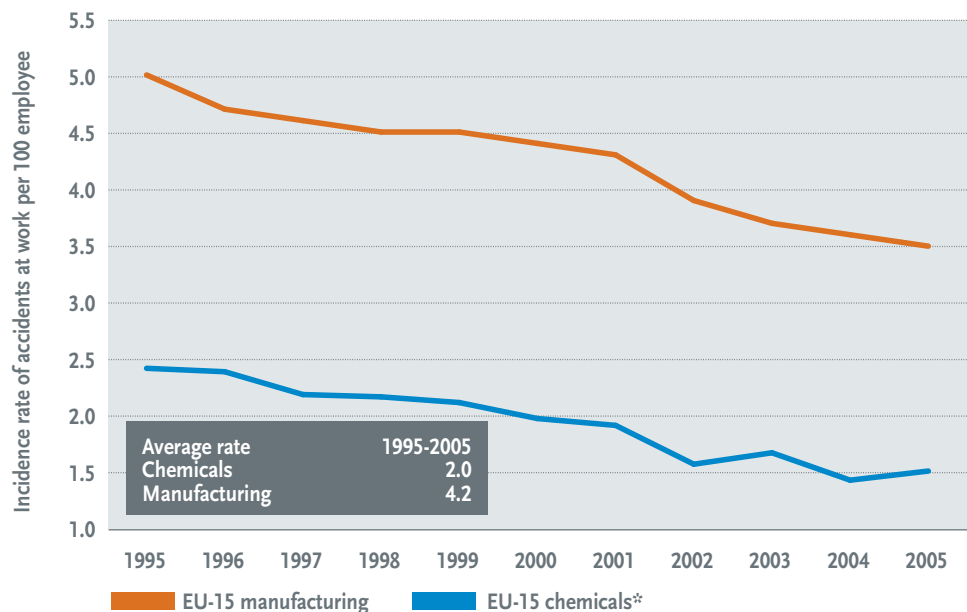
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Chemicals sector incidence rate of accidents two times lower than manufacturing average

- Between 1995 and 2005, the incidence rate of accidents at work in the EU-15 chemicals industry, including pharmaceuticals, decreased by 37 per cent from 2.4 in 1995 to 1.5 in 2005.
- The EU-15 manufacturing sector performed less well compared to the EU-15 chemicals industry in terms of incidence rate of accidents at work, declining 29 per cent from 5.0 in 1995 to 3.5 in 2005.

Sources: Eurostat (health_safety_work) database and Cefic analysis

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Safety at work – incidence rate* of accidents at work in the EU manufacturing sector (2005)

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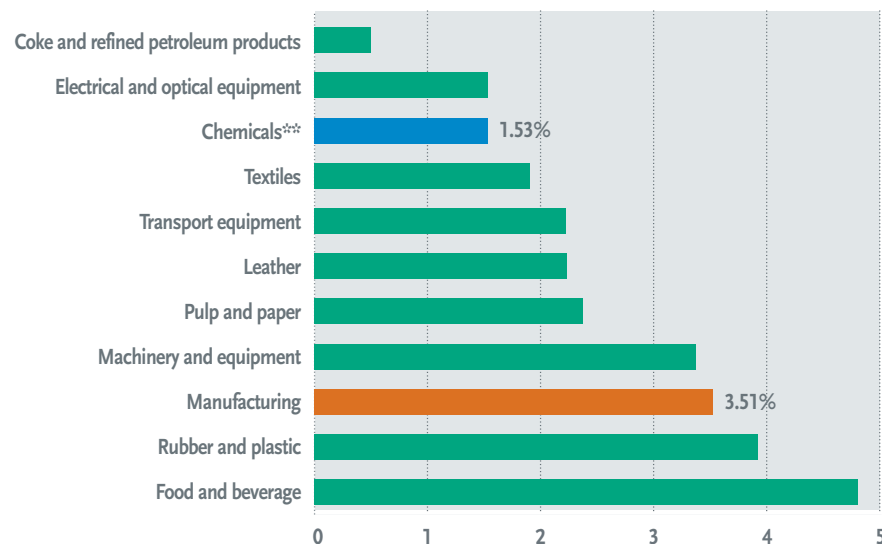
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Key sectors: Top 10



Source: Eurostat and Cefic analysis
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Safety at work – the third lowest incidence rate of accidents at work in the EU manufacturing sector

- As shown, the incidence rate of accidents at work in the EU-15 chemicals industry, including pharmaceuticals, is the third lowest in the EU manufacturing sector, behind the manufacturing categories coke & refined petroleum products and electrical & optical equipment.
- Safety at work in the EU-15 chemicals industry, including pharmaceuticals, was 2.2 times higher in 2005 than in the EU-15 manufacturing sector as a whole.