

# Chapter 4 - NFR 2 - Industrial Processes and Product Use

Industrial processes are an important emission source for most pollutants. Due to Germany's high-level, differentiated industry featuring numerous companies and a large number of plants for each sector, emission estimation for industrial processes is very complex. Please refer to the sub-sections below for details.

In the area of industrial processes, production data from association statistics and of manufacturers' information is used. In the interest of the inventory's completeness and reliability, checking of source-category definitions and data-collection methods will stay a priority where emissions reporting is based on such sources. The inventory is considered complete for the main industrial processes. [!-(Should be described at the source category level) Nevertheless, there are still certain categories awaiting further examination, though only negligible contributions to the national total emissions are expected. -]

## **NFR 2 consists of the following and sub-categories:**

<b>2.A Mineral Industry</b>
2.A.1 Cement Production
2.A.2 Lime Production
2.A.3 Glass Production
2.A.5.a Quarrying and Mining of Minerals other than Coal
2.A.5.b Construction and Demolition
2.A.5.c Storage, Handling and Transport of Mineral Products
2.A.6 Other Mineral Products
<b>2.B Chemical Industry</b>
2.B.1 Ammonia Production
2.B.2 Nitric Acid Production
2.B.3 Adipic Acid Production
2.B.5 Carbide Production
2.B.6 Titanium Dioxide Production
2.B.7 Soda Ash Production
2.B.10.a Other
2.B.10.b Storage, Handling and Transport of Chemical Products
<b>2.C Metal Production</b>
2.C.1 Iron and Steel Production
2.C.2 Ferroalloys Production
2.C.3 Aluminum Production
2.C.4 Magnesium Production
2.C.5 Lead Production
2.C.6 Zinc Production
2.C.7.a Copper Production
2.C.7.b Nickel Production
2.C.7.c Other Metal Production
2.C.7.d Storage, Handling and Transport of Metal Products

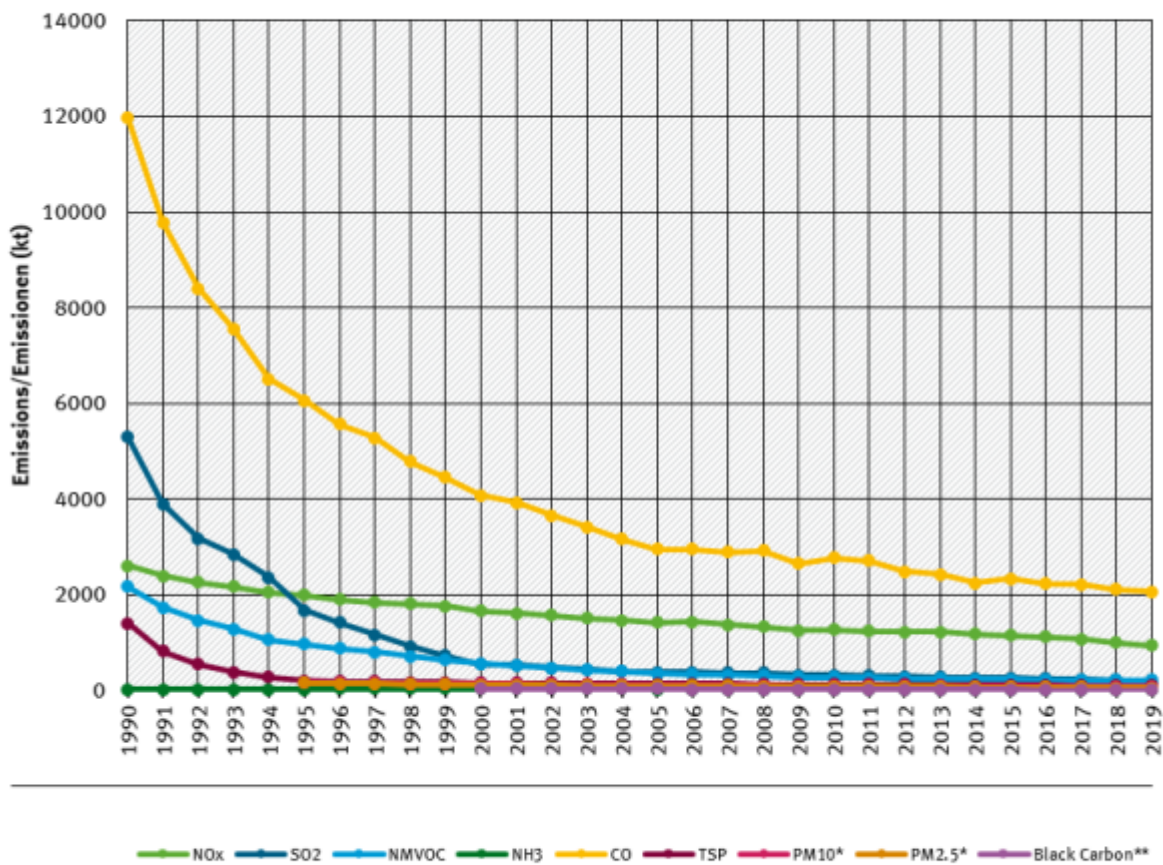
<b>2.A Mineral Industry</b>
<b>2.D Other Solvent and Product Use</b>
2.D.3.a Domestic Solvent Use including fungicides
2.D.3.b Road Paving with Asphalt
2.D.3.c Asphalt Roofing
2.D.3.d Coating Applications
2.D.3.e Degreasing
2.D.3.f Dry Cleaning
2.D.3.g Chemical Products
2.D.3.h Printing
2.D.3.i Other Solvent Use
2.D.3.i (Stationary) Use of Lubricants
<b>2.G Other Product Use</b>
2.G.4 Use of Fireworks
2.G.4 Use of Tobacco
2.G.4 Charcoal
2.G.4 (Mobile) Use of Lubricants
<b>2.H Other (Pulp &amp; Paper, Food)</b>
2.H.1 Pulp and Paper Industry
2.H.2 Food and Beverages Industry
2.H.3 Other Industrial Processes
<b>2.I Wood Processing</b>
<b>2.J Production of POPs</b>
<b>2.K Consumption of POPs and Heavy Metals</b>
<b>2.L Other Production, Consumption, Storage, Transportation or Handling of Bulk Products</b>
2.L(a) Handling of Bulk Products
2.L(b) Diffuse Emissions From Industrial Establishments

## Visual overview

Chart showing emission trends for main pollutants in *NFR 2 - Industrial Processes*:

### Energy/Energie (NFR 1)

Emissions by pollutant / Emissionen nach Schadstoff



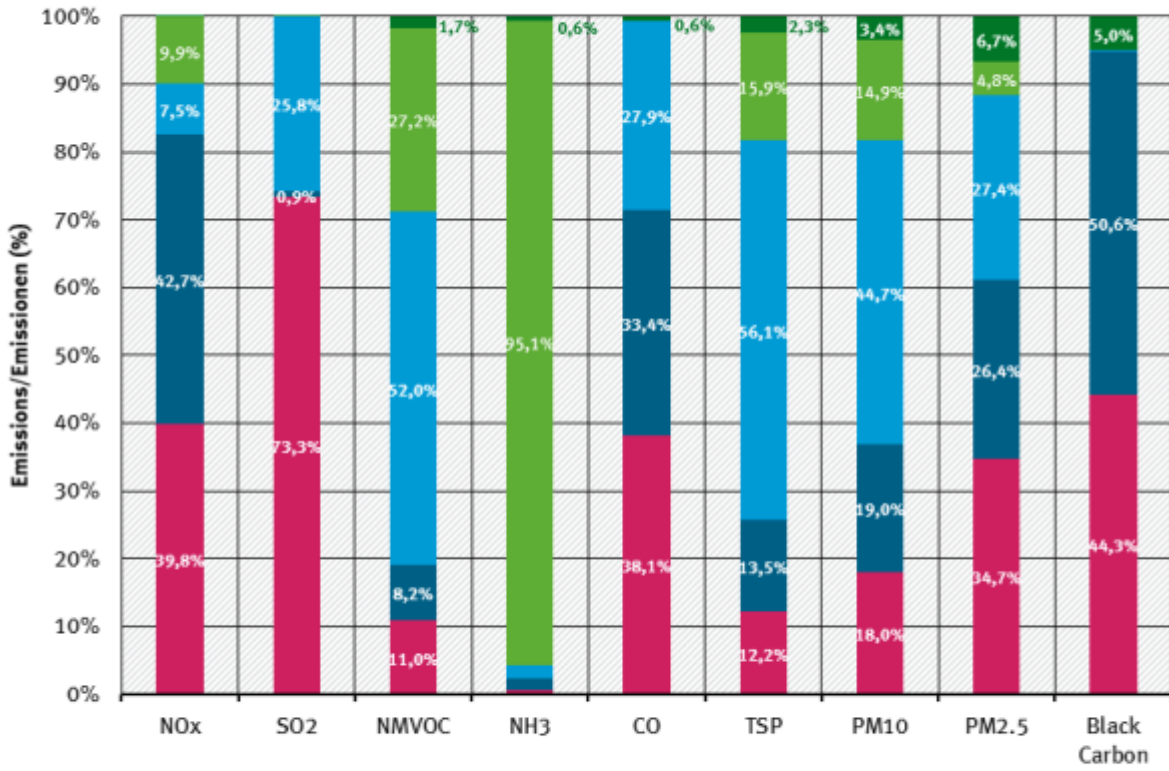
\* Base Year for PM = 1995 / Basisjahr für Feinstäube (PM) ist 1995  
 \*\* Black Carbon emissions from 2000 / Black Carbon Emissionen erst ab 2000  
 Quelle: German Emission Inventory (08.01.2021)

NFR 2 emission trends per category

Contribution of NFR categories to the emissions/Anteile der NFR-Kategorien an den Emissionen

**Contribution of NFR categories to the emissions/Anteile der NFR-Kategorien an den Emissionen**

2018 percentages per air pollutant / Anteile pro Luftschadstoff für 2019



■ 1. Energy/Energie\* ■ 1.A.3 Transport/Verkehr ■ 2. Industrial Processes/Industrieprozesse ■ 3. Agriculture/Landwirtschaft ■ 5. Waste/Abfall

\* w/o Transport / ohne Verkehr (1.A.3)

Quelle: German Emission Inventory (08.01.2021)

Contribution of NFR categories to the emissions