

Explanation of Key Trends - Fine Particulate Matter (PM_{2.5})

Obligations

Germany has made a commitment to reduce particulate matter emissions. The revised Gothenburg Protocol and the revised NEC Directive both define emission reduction targets relative to a 2005 base year, mandating 26% (2020) and 43% (2030) reductions respectively.

While Germany's compliance with these obligations is not discussed here, further information on this subject can be found in [Chapter 9 - Projections](#) and [Chapter 11 - Adjustments and Emission Ceiling Exceedance](#).

Main drivers

Between 1995 and 2022, **Total PM_{2.5} emissions declined by 57.8%**.

The Main Drivers for PM_{2.5} emissions are **Fuel Combustion (NFR 1.A)** with 73% of total 1995 emissions and a 64% reduction between 1995 and 2022 and, as a sum, the **Industrial Processes (NFR 2)** with about 20% of total 1995 emissions and a 48% reduction between 1995 and 2022.

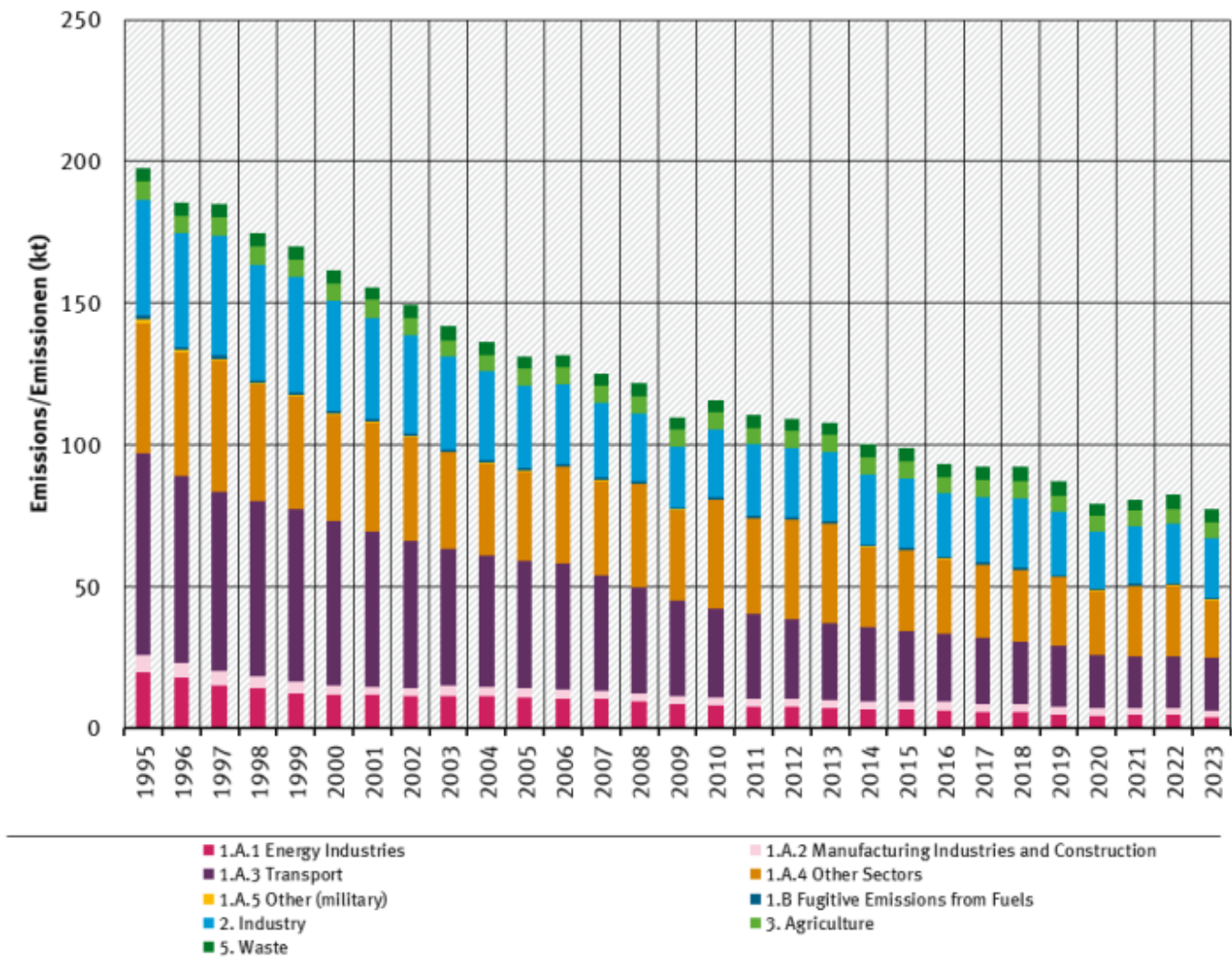
Within both National totals and NFR 1.A, **Transport (NFR 1.A.3)** is responsible for the biggest part of PM_{2.5} emissions. Here, about 77% of 2019 PM_{2.5} transport emissions are induced by **Road Transport (NFR 1.A.3.b)**, caused by two third directly by fuel consumption (**NFR 1.A.3.b.i - v**) and the other third by road abrasion and tyre and brake wear (**NFR 1.A.3.b.vi - vii**).

Table: PM_{2.5} emissions 1990-2021, in kilotonnes [kt]

																	Trend: latest compared to	
1995	2000	2005	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	1995	previous year
197	162	131	116	111	109	108	100	99	93	92	92	87	79	81	82	77	-60.8%	-5.9%

Fine Particulate Matter / Feinstaub (PM_{2.5})

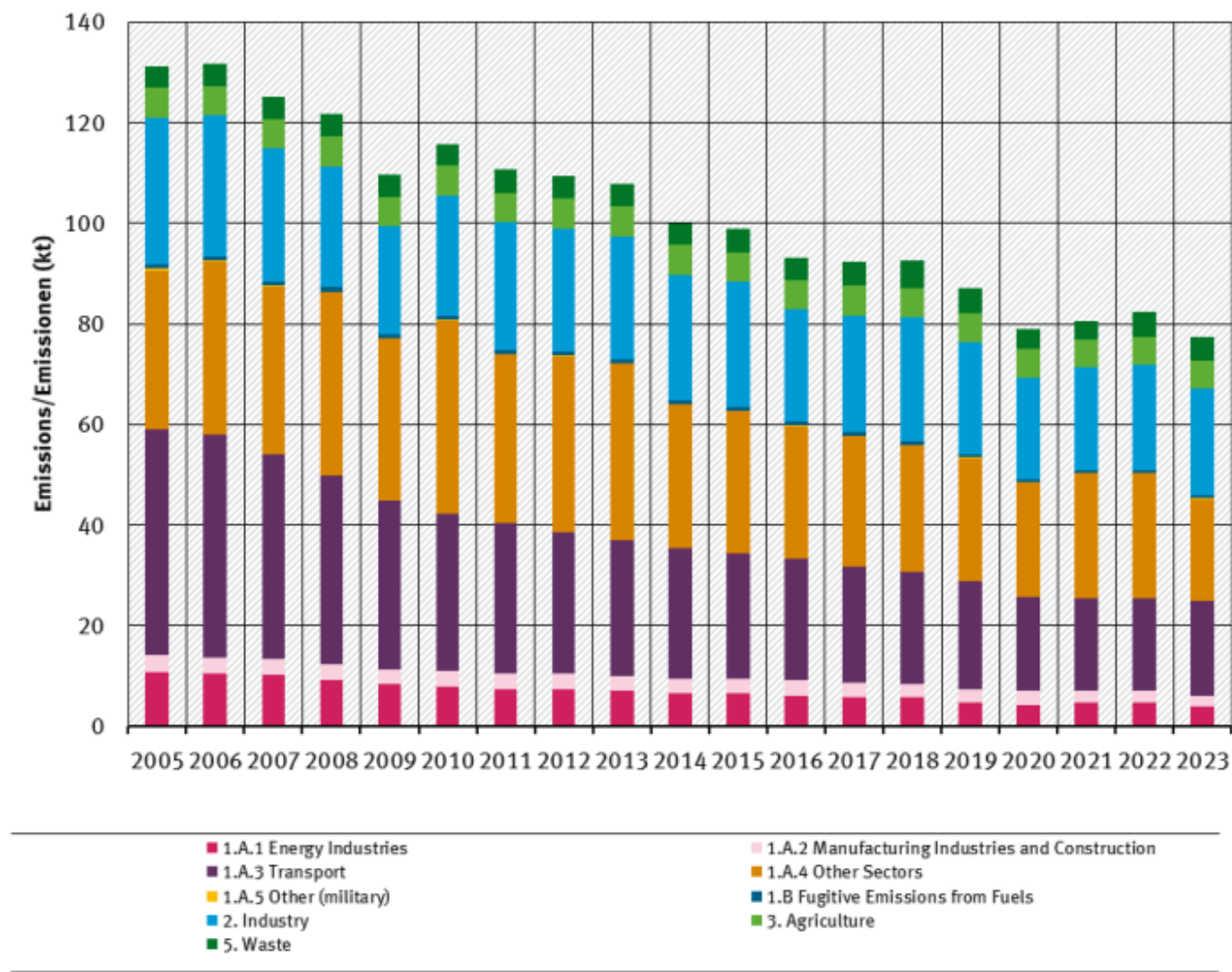
Emissions per Sector / Sektorale Emissionen



Quelle: German Emission Inventory (14.02.2025)

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