

Explanation of Key Trends - Ammonia

Obligations

Germany has made a commitment under the Gothenburg Protocol to reduce ammonia emissions. Since 2010, it is no longer permissible to exceed a National Emission Ceiling of 550kt NH₃ for Germany as whole. The revised Gothenburg Protocol and the revised NEC Directive both define emission reduction targets relative to a 2005 base year, mandating 5% (2020) and 29% (2030) reductions respectively.

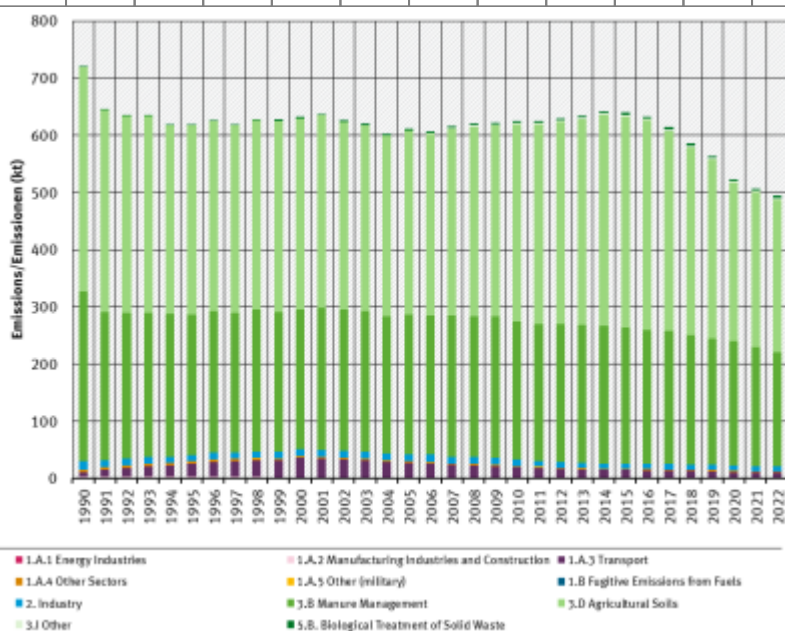
Further details can be found in [Chapter 9 - Projections](#) and [Chapter 11 - Adjustments and Emission Ceiling Exceedance](#).

Main drivers

The Main Drivers for NH₃ emissions are agricultural emissions from Manure Management (NFR 4.B) with 42% of total 1990 emissions and a 20% reduction between 1990-2019 and Agricultural Soils (NFR 4.D) with even 53% of total 1990 emissions and a 16% decrease between 1990-2018. The overall emission trend mainly follows the agricultural emissions closely with a total reduction of 18% between 1990 and 2019. The decrease of NH₃ emission in the year 1991 is due to a reduced livestock population that followed after the German reunification, while no explicit trend is discernible for the years up to 2016. Between 2016 and 2019 there is a slight reduction of about 8%, but it has to be seen how stable this trend will be.

NH₃ Emissions 1990-2019

| Total Emissions (kt) | | | | | | | | | | | | | | Trend: latest compared to | |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|------------|
| 1990 | 1995 | 2000 | 2005 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 1990 | last years |
| 3.891 | 2.341 | 1.804 | 1.486 | 1.361 | 1.273 | 1.257 | 1.212 | 1.174 | 1.147 | 1.142 | 1.147 | 1.125 | 1.121 | ➡ -71,2% | ➡ |



NH₃ trend by sector