SDG Goal 13	Climate action
SDG Target 13.2	Integrate climate change measures into national policies, strategies and planning
SDG Indicator 13.2.2	Total greenhouse gas emissions per year
Time series	Total greenhouse gas emissions

1. General information on the time series

- Date of national metadata: 09 February 2021

- National data: http://sdg-indikatoren.de/en/13-2-2/

- Definition: The time series at national level contains emissions of the following greenhouse gases (substances or substance groups) in CO2 equivalents: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), nitrogen triflouride (NF3), hydroflourocarbons (HFC), perflourocarbons (PFC) as well as sulphur hexaflouride (SF6).

- Disaggregation: Not available.

2. Comparison with global metadata

- Date of global metadata: April 2020

- Global metadata: https://unstats.un.org/sdgs/metadata/files/Metadata-13-02-02.pdf

- The time series is compliant with the global metadata.

3. Data description

- The data are provided annually by the German Environment Agency as part of the reporting under the United Nations Framework Convention on Climate Change and the Kyoto Protocol. The determination and reporting of emissions is subject to a comprehensive quality management system.

Please note that the indicator according to the Kyoto Protocol does not show the carbon dioxide emissions arising from land use, land use change and forestry. Sea transport and international air transport are also excluded from the calculation.

To summarise the various greenhouse gases into a single index, they are each expressed in "CO2 equivalents", which means that they are converted into the quantity of CO2 that would have a comparable impact on global warming. Because of cumulation, however, the development of an individual greenhouse gas cannot be determined. Thus, rising emissions in one greenhouse gas may be (over)compensated by a decreasing emissions of another greenhouse gas.

The calculation is made according to the polluter pays principle and according to the territorial concept. The following steps were carried out during the calculation: 1. Identification of the most important sources of emissions in Germany for all greenhouse gases and air pollutants
2. Determination of the level of emissions for these sources under certain conditions
3. Obtaining of specific emissions factors
4. Multiplication of the specific emission factors by the activity data of a source to quantify the amount of emissions

4. Accessibility of source data

• Emission of greenhouse gases covered by the UN Framework Convention on Climate:
https://www.umweltbundesamt.de/en/indicator-greenhouse-gas-emissions

• Environmental-economic accounts of the Länder – Gases (only available in German):„Umweltökonomische Gesamtrechnungen der:
http://www.statistikportal.de/de/ugrdl/ergebnisse/gase

5. Metadata on source data

• Calculation of national inventory report on greenhouse gas emissions, chapter 1:
https://www.umweltbundesamt.de/en/publikationen/submission-under-the-united-nations-framework-5

• Environmental-economic accounts - method of air emission accounting (only available in German): „Umweltökonomische Gesamtrechnungen - Methode der Luftemissionsrechnung":
https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Umwelt/UGR/energiefluesse-emissionen/_inhalt.html

6. Timeliness and frequency

• Timeliness: t + 2 years

• Frequency: Annual

7. Calculation method

• Unit of measurement: Million t CO2 eq

• Calculation method:

Special evaluation