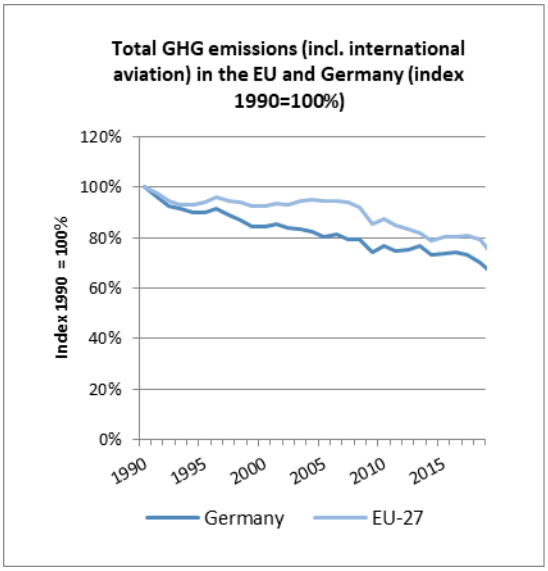
European Commission

Kick-starting the journey towards a climate-neutral Europe by 2050

Country fact sheet: Germany

EU Climate Action Progress Report 2020

1. Total greenhouse gas emissions



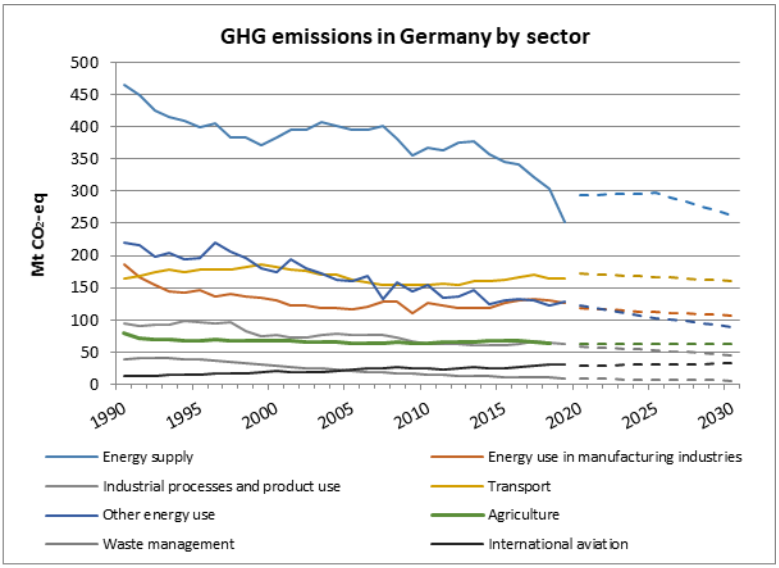


Figure 1: Left hand side: Total greenhouse gas emissions (incl. international aviation) 1990-2019 (index 1990 = 100 %). Right hand side: Greenhouse gas emissions by sector[1] – historical emissions 1990-2018, proxy 2019, projections WEM 2020-2030 (Mt CO_2-eq).

[1] The sectors in the figure correspond to the following IPCC sectors: Energy supply: 1A1, 1B and 1C. Energy use in manufacturing industries: 1A2. Industrial processes and product use: 2. Transport: 1A3. Other energy use: 1A4, 1A5 and 6. Agriculture: 3. Waste: 5. International aviation: memo item.

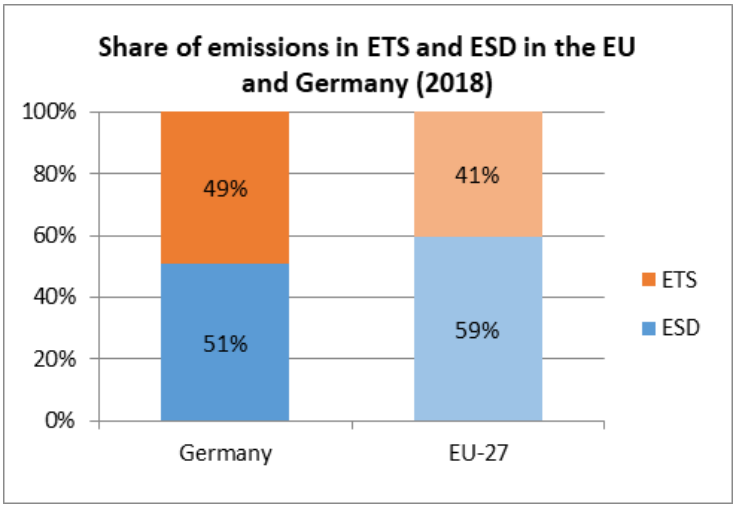


Figure 2: Share of emissions covered by the ETS and the ESD (2018).[2]

2. ETS emissions

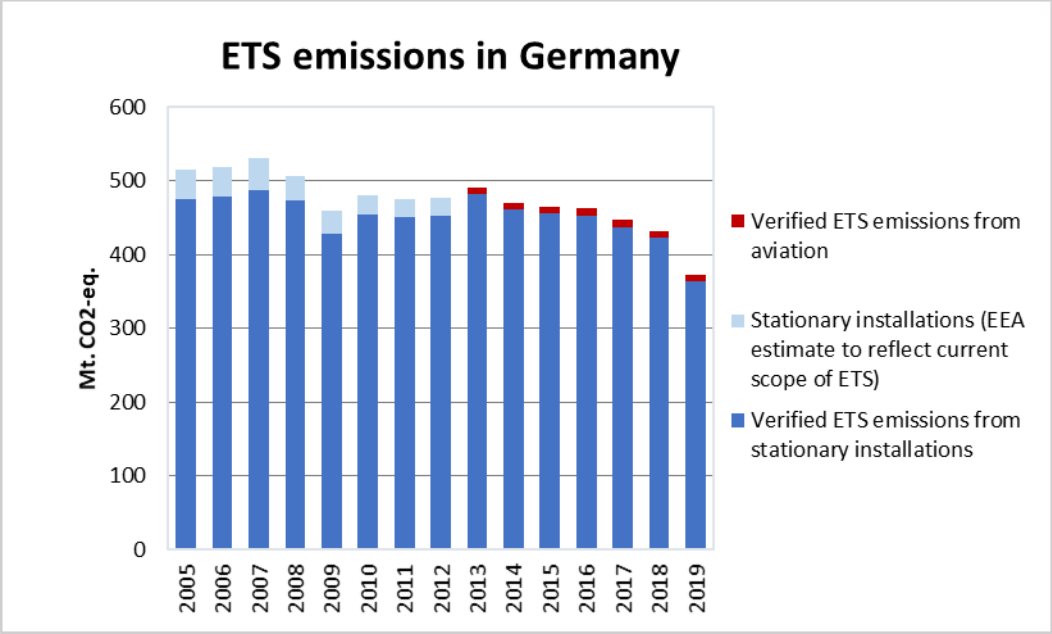


Figure 3: ETS emissions 2007-2019 (Mt CO_2-eq).[3]

[2] Excluding international aviation, CO_2 from domestic aviation and NF_3.

[3] The scope of ETS was extended from 2013. To reflect the current scope of ETS, estimates made by EEA are included in the figures from 2005 to 2012. The estimates cover only emissions from stationary installations.

3. Emissions in Effort Sharing sectors

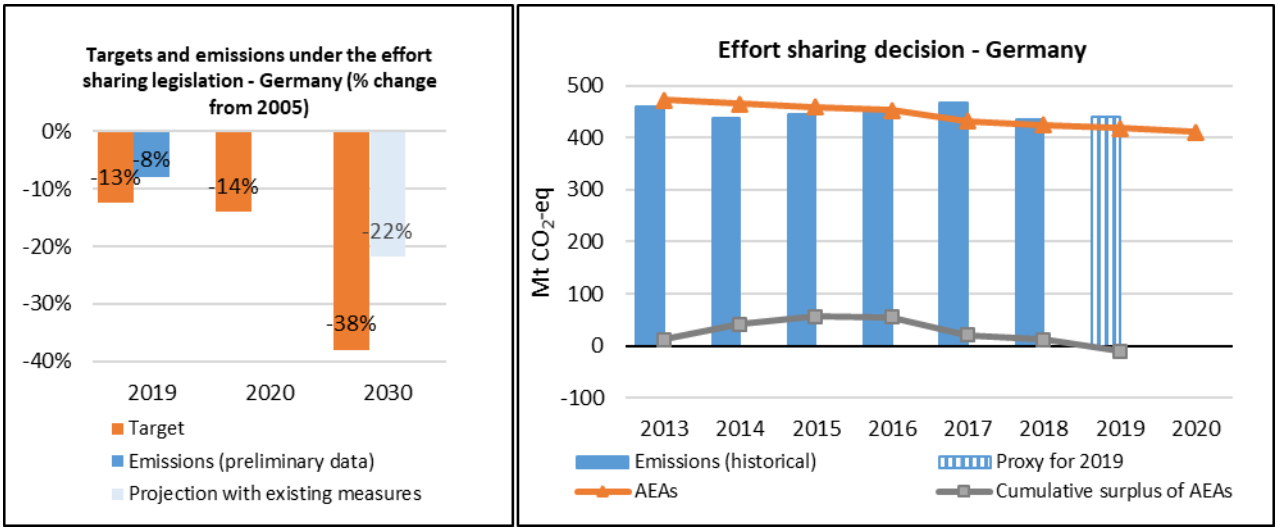


Figure 4: Left hand side: Emissions and targets under the Effort Sharing Decision/ Effort Sharing Regulation 2019, 2020 and 2030 as percentage change from 2005. Right hand side: Emissions, annual emission allocations (AEAs) and accumulated surplus/ deficit of AEAs under the Effort Sharing Decision 2013-2019 (Mt CO_2-eq).

4. Land use, land use change and forestry

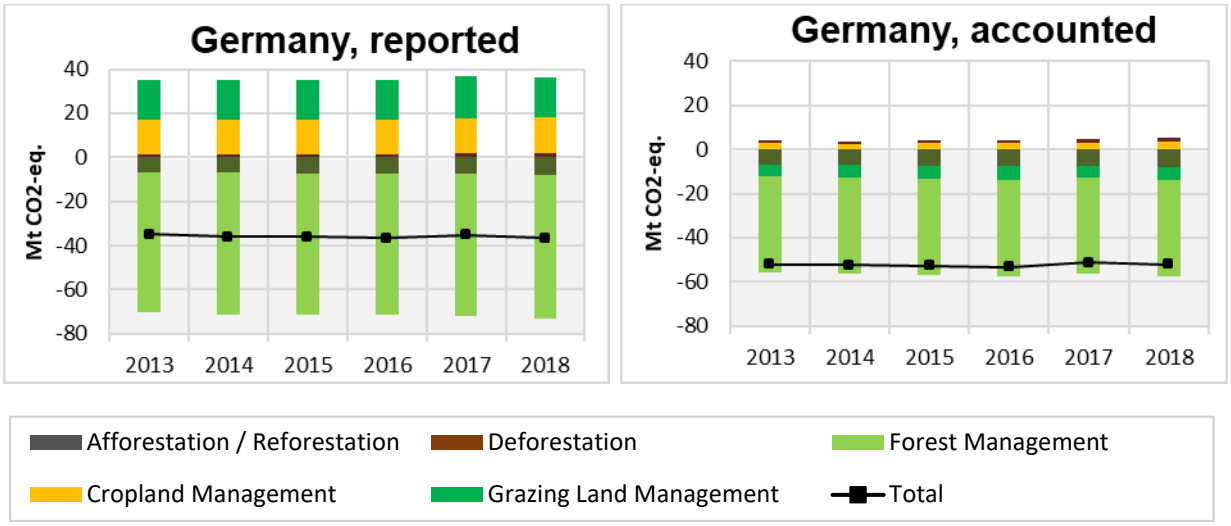


Figure 5: Reported and accounted emissions and removals from LULUCF (Mt CO_2-eq.)[4]

Reported quantities under the Kyoto Protocol for Germany show net removals of, on average, -35.9 Mt CO_2-eq for the period 2013 to 2018. In this regard, Germany contributes with 9.0% to the annual average sink of -396.7 Mt CO_2-eq of the EU-27. Accounting for the same period depicts net credits of, on average, -52.3 Mt CO_2-eq, which corresponds to 45.9% of the EU-27 accounted sink of -114.1 Mt CO_2-eq. Reported net removals and accounted net credits show no trends and little variation. Germany elected to report and account for Cropland Management as one of six EU Member States and for Grazing Land Management as one of five EU Member States.

The dominating reported activity is Forest Management with removals followed by emissions by Grazing Land Management and Cropland Management. Removals by Afforestation/Reforestation play a less important role, and emissions by Deforestation are negligible in the emission budget of the LULUCF sector. Removals by Forest Management and Afforestation/Reforestation show small increasing trends over the six-year period.

Credits by Forest Management are the dominant accounted activity. In this preliminary simulated accounting exercise potential credits by Forest Management of, on average, -47.1 Mt CO_2-eq per year are capped to -43.7 Mt CO_2-eq per year. Germany is one of five EU Member States that exceed the cap of 3.5% from emissions of the base year (1990). Notably, Germany is the EU Member State with by far the highest cap threshold. Credits by Afforestation/Reforestation and Grazing Land Management play a moderate role. Debits by Cropland Management have a small impact and, debits by Deforestation are negligible. Dynamics are low with very small increasing trends for credits by Afforestation/Reforestation and increasing debits by Cropland Management.

[4] The differences between reported and accounted emissions from LULUCF under the Kyoto Protocol are described in the '*explanatory note on LULUCF – accounted and reported quantities under the Kyoto Protocol*'.

Data sources

Figure 1: Annual European Union greenhouse gas inventory 1990–2018 (EEA greenhouse gas data viewer: https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer). *Approximated EU greenhouse gas inventory 2019* (European Environment Agency). Member States national projections, reviewed by the European Environment Agency.

Figure 2: Verified ETS emissions abstracted from European Union Transaction Log 30.06.2020 (EEA ETS data viewer: https://www.eea.europa.eu/data-and-maps/dashboards/emissions-trading-viewer-1). ESD data from European Commission: *Commission Implementing Decision (EU) on greenhouse gas emissions for each Member State for the year 2018 covered by Decision No 406/2009/EC of the European Parliament and of the Council* (forthcoming).

Figure 3: abstract from European Union Transaction Log 30.06.2020 (EEA ETS data viewer: https://www.eea.europa.eu/data-and-maps/dashboards/emissions-trading-viewer-1).

Figure 4: European Commission: *Commission Implementing Decision (EU) on greenhouse gas emissions for each Member State for the year 2018 covered by Decision No 406/2009/EC of the European Parliament and of the Council* (forthcoming). *Approximated EU greenhouse gas inventory 2019* (European Environment Agency). Member States national projections, reviewed by the European Environment Agency.

Figure 5: European Commission based on data accounted and reported by Member States under the Kyoto Protocol.