

Germany

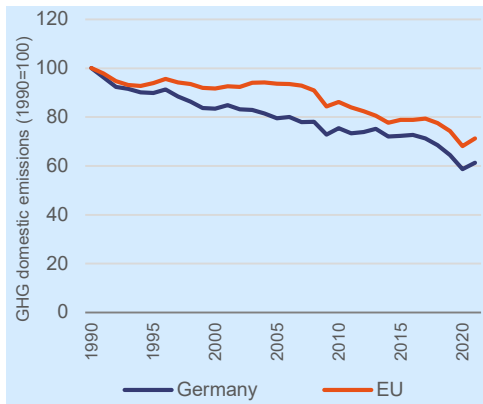
1) Key takeaways

- In 2021, GHG emissions in Germany were 4.8% below 2019 pre-pandemic levels.
- Over the same period, ETS and Effor Sharing emissions decreased by 2.3% and by 8.7%, respectively.
- Net GHG emissions (i.e. including LULUCF) in 2021 were 39.6% lower than 1990 levels.
- The LULUCF sector removed 45.23 MtCO₂-eq on average per year from 2013 to 2020, based on accounting.

2) Greenhouse gas emissions



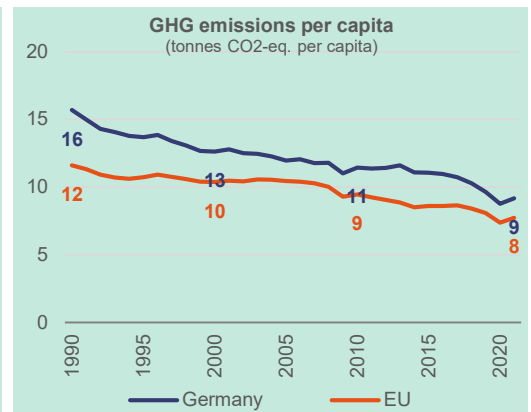
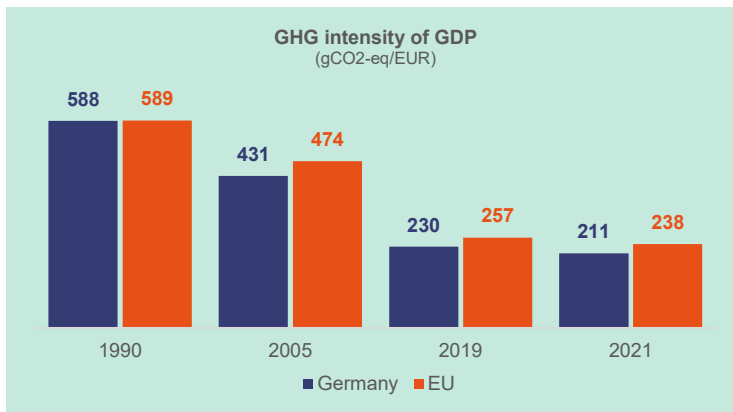
In 2021, approximated domestic greenhouse gas (GHG) emissions in Germany were 761.6 MtCO₂-eq, 4.5% higher compared to 2020 but 4.8% below pre-pandemic levels. Overall, net domestic emissions, including the Land Use, Land Use Change and Forestry (LULUCF) sector, were 39.6% lower than 1990 levels.



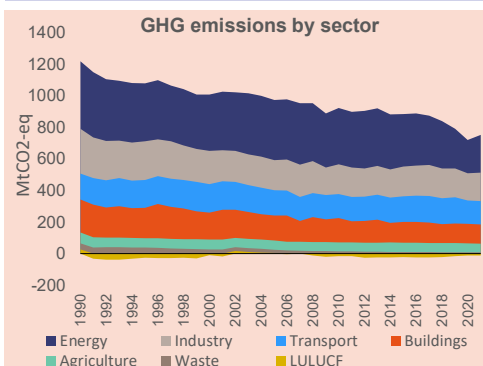
	1990 (MtCO ₂ -eq)	2005 to 1990 (% change)	2019 to 2005 (% change)	2021 to 2019 (% change)	2021 to 1990 (% change)
Germany	1242	-21%	-19%	-5%	-39%
EU	4847	-6%	-21%	-4%	-29%

	1990 (MtCO ₂ -eq)	2005 to 1990 (% change)	2019 to 2005 (% change)	2021 to 2019 (% change)	2021 to 1990 (% change)
Germany	1269	-20%	-20%	-6%	-40%
EU	4633	-13%	-26%	-10%	-33%

Note: GHG emissions and removals for 1990-2020 are based on data submitted by EU Member States to the UNFCCC under Regulation (EU) No 525/2013. Figures may change following resubmissions. GHG emissions for 2021 are based on approximated GHG inventories.



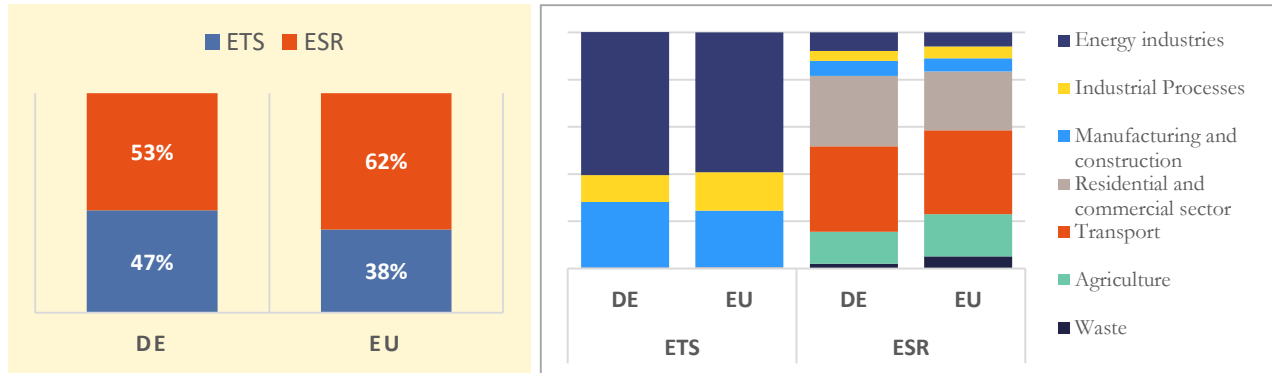
3) Greenhouse gas emissions by sector



	1990 (MtCO ₂ -eq)	2005 to 1990 (% change)	2019 to 2005 (% change)	2021 to 2019 (% change)	2021 to 1990 (% change)
Energy	427.4	-11%	-34%	-4%	-44%
Industry	283.7	-33%	-4%	-1%	-36%
Transport	164.5	-2%	2%	-10%	-10%
Buildings	208.1	-24%	-20%	-4%	-42%
Agriculture	70.6	-18%	-2%	-4%	-22%
Waste	38.0	-44%	-57%	-9%	-78%
LULUCF	27.0	-84%	-442%	-23%	-142%
International aviation	12.0	91%	30%	-39%	52%

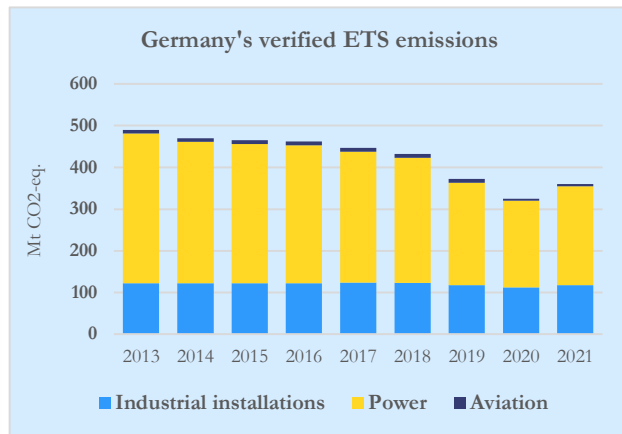
Notes: (1) Energy sector refers to electricity and heat production and petroleum refining. (2) Industry includes fuel combustion in manufacturing and construction and emissions in industrial processes and product use. (3) Buildings include emissions from energy use in residential and tertiary buildings, and energy use in agriculture and fishery sectors.

In 2021, the highest contribution to net GHG emissions in Germany came from the Energy sector (32%), followed by the Industry sector (24%) and the Transport sector (20%). Emissions from sectors under the Effort Sharing Regulation (ESR) were 53% compared to 62% for the EU as a whole (see shares in the charts below).



4) Emissions under the EU Emissions Trading System (ETS)

In 2021, stationary installations (e.g. power generation and manufacturing industry) in Germany emitted 355.1 million tonnes of CO₂-eq emissions (equal to 47% of Germany's total GHG emissions). This is 10.9% higher compared to 2020 but 2.3% below pre-pandemic levels. By 2021, emissions from stationary installations were down by 26.2% against 2013 level (i.e. -31.0% to 2005 levels). Aviation emissions covered by the EU ETS were 18.4% higher compared to 2020 but 48.7% below 2019 level.



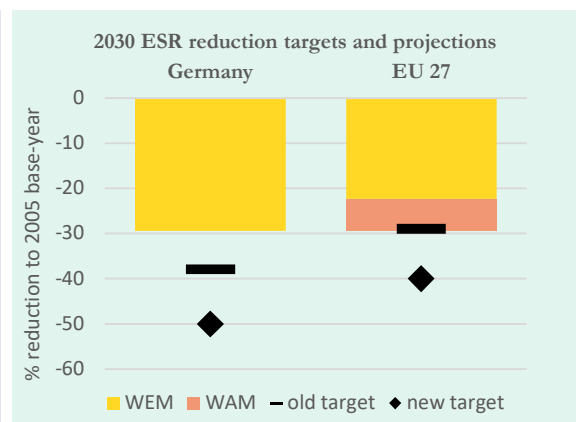
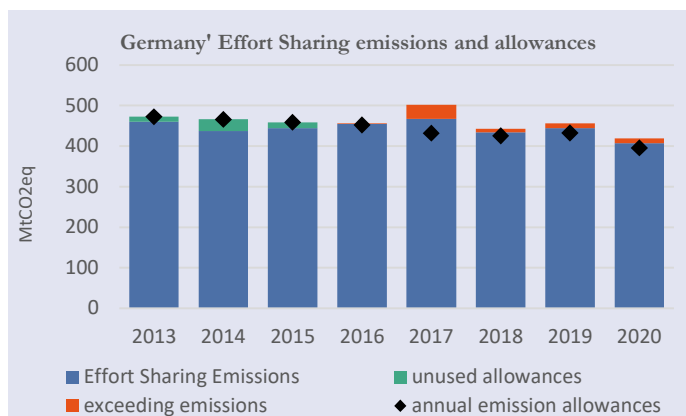
In parallel, Germany has raised over EUR 18.4 billion in auction revenues since 2013, available for further climate action and energy transformation. Germany reported that an average of 100% of revenues was spent for climate and energy purposes over the same period. (*)

Mt CO ₂ -eq	2013	2020	2021
Power installations	359.0	207.8	237.5
% change since 2013	-	-42.1%	-33.8%
Industrial installations	122.1	112.5	117.6
% change since 2013	-	-7.9%	-3.7%
Aviation (**)	8.83	3.96	4.69
% change since 2013	-	-55.2%	-46.9%

(*) 100% of revenues is spent on energy and climate projects. All revenues go to a fund for climate and energy projects, which is additionally co-funded from the general budget.

(**) ETS emissions from aviation include flights within the European Economic Area (EEA) and outgoing flights to Switzerland and to the UK.

5) Emissions in Effort Sharing sectors



Note: (1) Verified emissions based on annual inventory review under the Effort Sharing Decision (ESD). (2) Projections as reported by Member States under Reg. (EU) 2018/1999, compiled and checked by the EEA. (3) ESR base-year emissions and targets have been approximately converted into GWP AR4 for comparability. For these reasons, the distances to targets for 2030 are provided for illustrative purposes only (4) WEM = with existing measures, WAM = with additional measures.

In 2021, effort sharing approximated emissions in Germany were 405.7 MtCO₂eq (equal to 53% of Germany's total GHG emissions), 0.4% lower than in 2020 and 8.7% lower than 2019 pre-pandemic level.

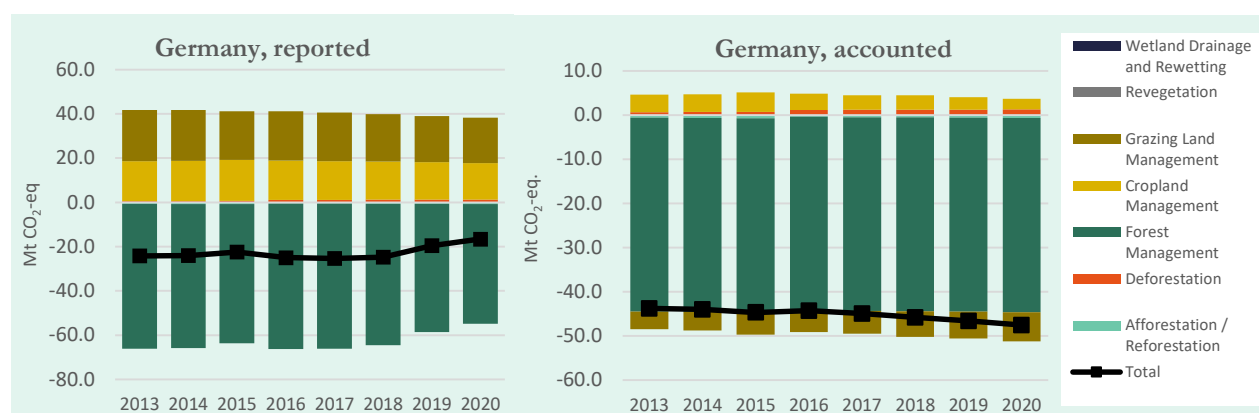
Between 2013 and 2019, Germany exceeded its annual emission allocations (AEAs) 4 times. However, Germany complied with the Effort Sharing Decision by making use of the flexibilities provided therein.

In 2020, effort sharing emissions in Germany exceeded its AEAs. Germany will need to buy AEAs from other Member States and/or use international credits to comply in 2020 as it does not have enough banked AEA surplus, having carried forward part of its 2020 AEAs for compliance in 2019.

6) Land Use, Land Use Change and Forestry (LULUCF)



Reported quantities under the Kyoto Protocol for Germany show net removals of -22.7 Mt CO₂-eq on average per year for the period 2013 to 2020. In this regard, Germany contributes with 7.1% to the annual average sink of -320.2 Mt CO₂-eq of the EU-27. Accounting for the same period depicts net credits of, on average, -45.2 Mt CO₂-eq, which corresponds to 54.2% of the EU-27 accounted sink of -83.4 Mt CO₂-eq. Reported net removals and accounted net credits show no trends and little variation.



Notes: (1) Charts based on the submissions delivered until May 2022. (2) Data reported for the period 2013-2020, for mandatory and elected LULUCF activities, were submitted by Member States to the European Environment Agency (EEA) and underwent a simulated accounting process developed by the Joint Research Centre (JRC), together with DG CLIMA. (3) Reported data represent the gross annual flux of greenhouse gas from the sector, by activity, according to the IPCC methods for calculation in the framework of the Kyoto Protocol (KP). Accounting is aimed at assessing the impact of policies on climate actions on the actual data, for example as an increase in the sink within the Forest Management activity. (4) The simulated accounting process does not take into account any adjustments or flexibilities that a Member State may apply, for example the purchase of KP credits.

The dominating reported activity is Forest Management which results in a net removal, followed by emissions by Grazing Land Management and Cropland Management. Removals by Afforestation/Reforestation and emissions by Deforestation are negligible in the emission budget of the LULUCF sector. Emissions by Cropland Management and Grazing Land management show small decreasing trends over the eight-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, -46.6 Mt CO₂-eq per year are capped to -43.9 Mt CO₂-eq per year. Notably, Germany is the EU Member State with by far the highest cap threshold. Credits by Grazing Land Management play a moderate role. Debits by Cropland Management have a small impact. Debits by Deforestation and credits by Afforestation/Reforestation are negligible. Dynamics are low with very small increasing trends for credits by Grazing Land Management.

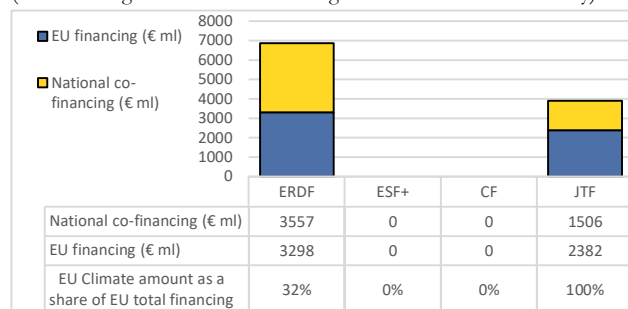
7) Financing Climate Action



Cohesion policy

Germany's Planned Financing for Climate Actions

(EU financing & national co-financing - 2021-2027 Cohesion Policy)



The chart presents information on investment plans and achievement targets from adopted programmes. Financing for cohesion policy uses a categorisation to provide thematic information on the finances planned.

Source: <https://cohesiondata.ec.europa.eu/>

Innovation and Modernisation Fund

Innovation Fund (Portfolio of signed projects)

	n.	EUR million
Small Scale Projects	2	6.5
Large Scale Projects	2	205.7

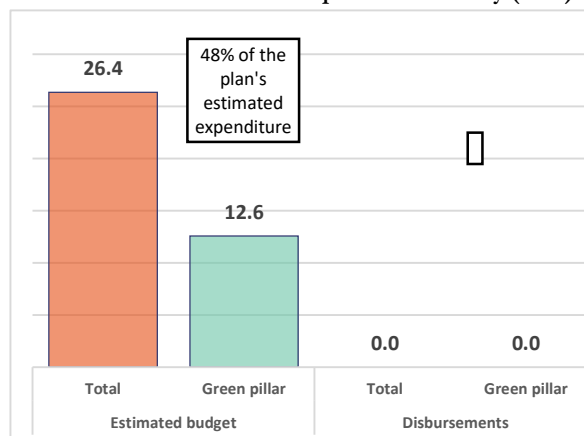
Modernisation Fund n. EUR million

(List of confirmed or approved investment proposals) non-beneficiary

Recovery & Resilience Facilities

RRF allocations (EUR billion)	Grants:	Loans:	% of GDP
	25.61	-	0.7

RRF contribution to the Green pillar in Germany (€ bn)



This graph displays: 1) the estimated cost of measures attributed by the Commission, in consultation with the Member State, to the green pillar either as primary or secondary assignments; and 2) how disbursements under the RRF (excluding pre-financing) relate to the green pillar.

Source: https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/index.html?lang=en