

Spain

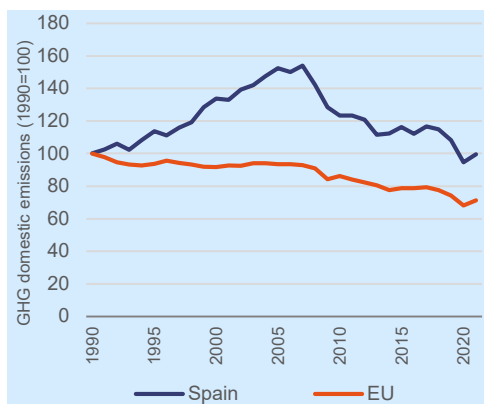
1) Key takeaways

- In 2021, GHG emissions in Spain were 8.0% below 2019 pre-pandemic levels.
- Over the same period, ETS and Effort Sharing emissions decreased by 16.3% and by 3.5%, respectively.
- Net GHG emissions (i.e. including LULUCF) in 2021 were 12.5% lower than 1990 levels.
- The LULUCF sector removed 9.29 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 Spain were 288.6 MtCO₂-eq, 5.1% higher compared to 2020 but 8.0% below pre-pandemic levels. Overall, net domestic emissions, including the Land Use, Land Use Change and Forestry (LULUCF) sector, were 12.5% lower than 1990 levels.



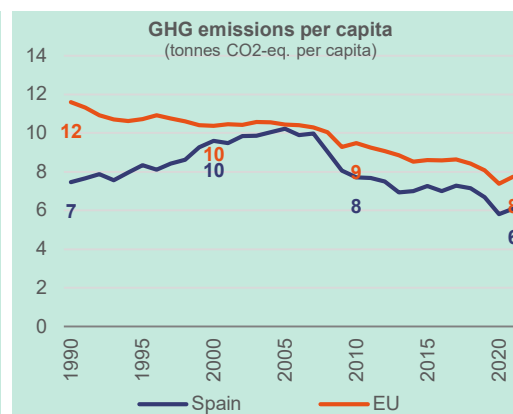
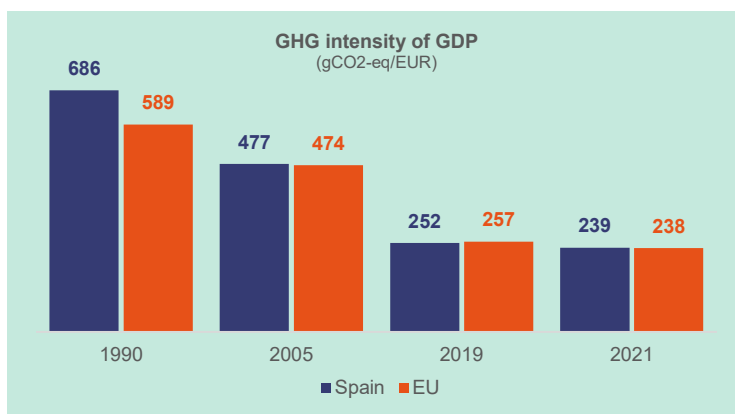
Total domestic GHG emissions

	1990 (MtCO ₂ -eq)	2005 to 1990 (% change)	2019 to 2005 (% change)	2021 to 2019 (% change)	2021 to 1990 (% change)
Spain	290	52%	-29%	-8%	-1%
EU	4847	-6%	-21%	-4%	-29%

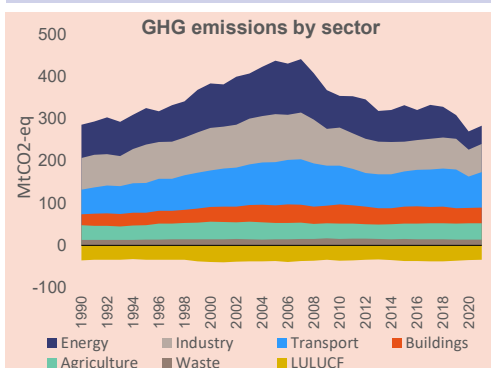
Total net domestic GHG emissions (including LULUCF)

Spain	254	39%	-37%	-19%	-12%
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.



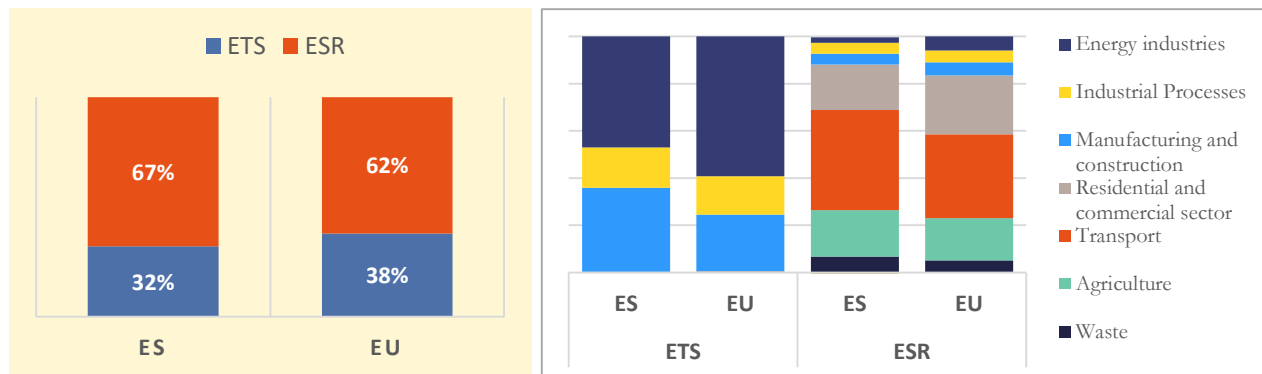
3) Greenhouse gas emissions by sector



	1990 (MtCO ₂ -eq)	2005 to 1990 (% change)	2019 to 2005 (% change)	2021 to 2019 (% change)	2021 to 1990 (% change)
Energy	78.9	61%	-55%	-23%	-44%
Industry	74.9	53%	-37%	-8%	-11%
Transport	58.7	75%	-11%	-8%	44%
Buildings	26.3	60%	-11%	0%	42%
Agriculture	35.1	10%	-3%	3%	10%
Waste	12.3	11%	-3%	-1%	7%
LULUCF	-36.0	5%	-1%	-6%	-3%
International aviation	4.8	144%	64%	-51%	98%

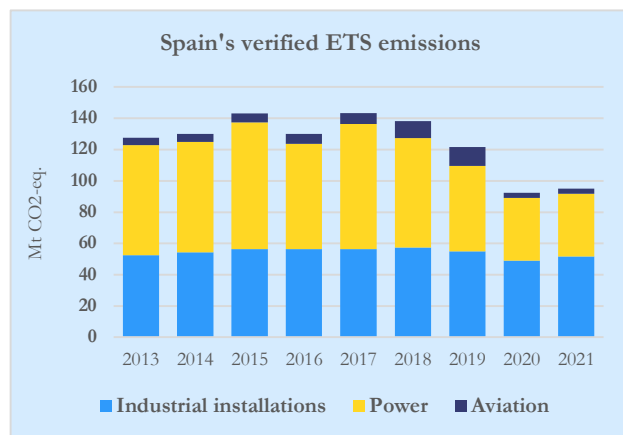
Notes: (1) Energy sector refers to electricity and heat production and petroleum refining. (2) Industry includes fuel combustion in manufacturing and construction and emissions in industrial processes and product use. (3) Buildings include emissions from energy use in residential and tertiary buildings,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

In 2021, the highest contribution to net GHG emissions in Spain came from the Transport sector (33%), followed by the Industry sector (26%) and the Energy sector (17%). Emissions from sectors under the Effort Sharing Regulation (ESR) were 67% 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 Spain emitted 91.7 million tonnes of CO₂-eq emissions (equal to 32% of Spain's total GHG emissions). This is 3.0% higher compared to 2020 but 16.3% below pre-pandemic levels. By 2021, emissions from stationary installations were down by 25.3% against 2013 level (i.e. -54.2% to 2005 levels). Aviation emissions covered by the EU ETS were 2.0% lower compared to 2020 and 72.0% below 2019 level.



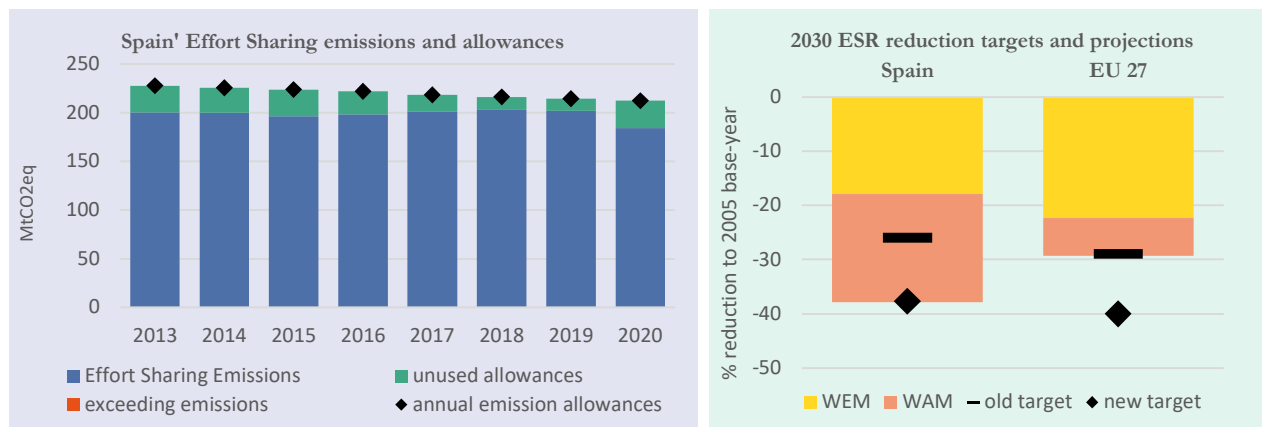
In parallel, Spain has raised over EUR 8.3 billion in auction revenues since 2013, available for further climate action and energy transformation. Spain reported that an average of 83% of revenues was spent for climate and energy purposes over the same period. (*)

Mt CO ₂ -eq	2013	2020	2021
Power installations	70.3	40.2	40.0
% change since 2013	-	-42.8%	-43.0%
Industrial installations	52.5	48.9	51.7
% change since 2013	-	-7.0%	-1.7%
Aviation (**)	4.74	3.42	3.35
% change since 2013	-	-27.8%	-29.2%

(*) Estimated revenues are earmarked for energy and climate project ahead of each year (up to a cap, which was EUR 500 million up to 2018 and EUR 1100 million after). The remainder goes to the general budget, part of which also funds climate projects, but are not included here (2013 spending includes phase 3 allowances auctioned in 2012).

(**) 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 Spain were 194.8 MtCO₂eq (equal to 67% of Spain's total GHG emissions), 5.8% higher than in 2020 but 3.5% lower than 2019 pre-pandemic level.

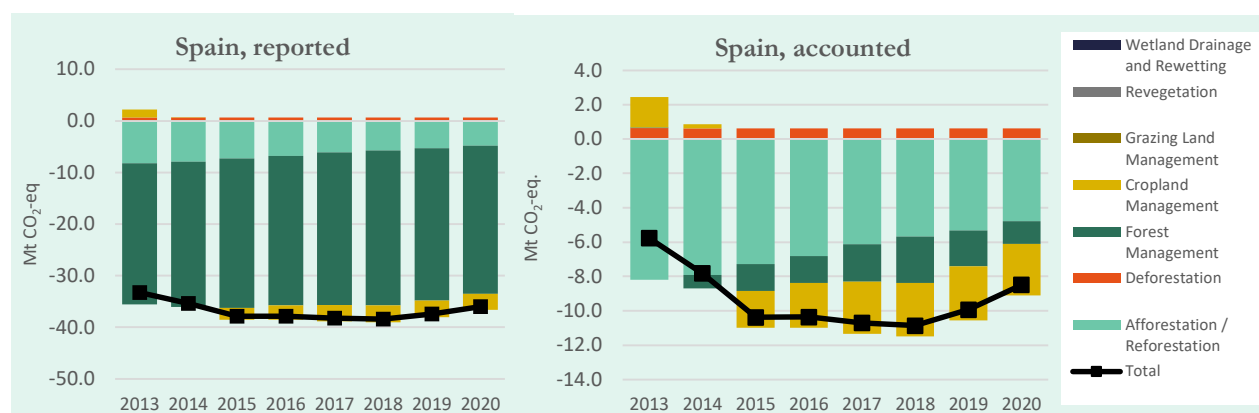
Between 2013 and 2019, Spain's emissions have always been below the annual limits.

In 2020, effort sharing emissions in Spain were below the annual limit.

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



Reported quantities under the Kyoto Protocol for Spain show net removals of -36.8 Mt CO₂-eq on average per year for the period 2013 to 2020. In this regard, Spain contributes with 11.5% 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, -14.4 Mt CO₂-eq, which corresponds to 11.1% of the EU-27 accounted sink of -83.4 Mt CO₂-eq. Reported net removals show an increase from 2013 to 2015 which level off thereafter and slightly decrease after 2019. This pattern is more accentuated for accounted net credits. Spain elected to report and account for Cropland Management.



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 with removals. Removals by Afforestation/Reforestation show sizable amounts. Small emission by Cropland Management for 2013 and 2014 turn into notable removals for the years thereafter. Emissions by Deforestation are negligible in the overall emission budget of the LULUCF sector. Removals by Forest Management and Cropland Management show increasing trends, but Afforestation/Reforestation depicts decreasing amounts of removals.

Credits by Afforestation/Reforestation and Cropland Management show dominant accounting quantities followed by Forest Management. Debits by Cropland Management in 2013 and credits for 2015 to 2020 show sizable amounts; debits by Deforestation are negligible. Trends of accounting quantities are clear with increasing credits by Forest Management Cropland Management, until 2018 and then a slight decrease. Decreasing patterns of credits by Afforestation/Reforestation can also be observed along the period.

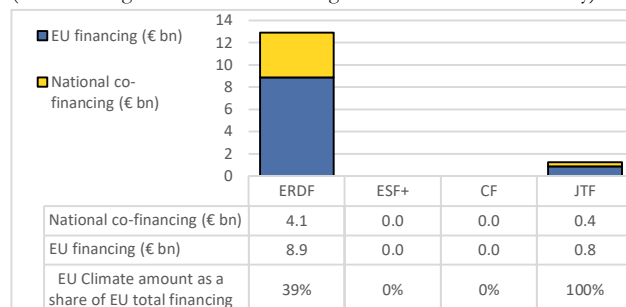
7) Financing Climate Action



Cohesion policy

Spain'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	7	24.9
Large Scale Projects	1	106.4

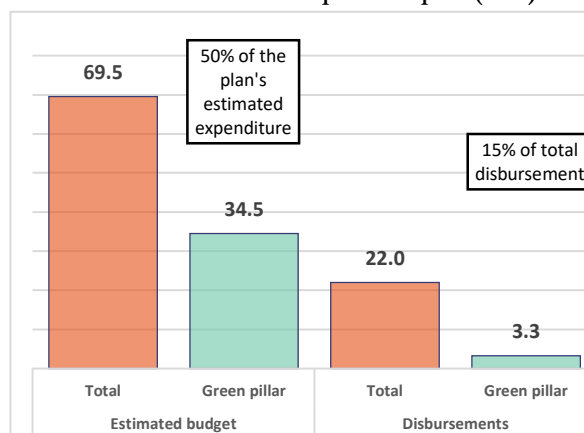
Modernisation Fund n. EUR million

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

Recovery & Resilience Facilities

RRF allocations (EUR billion)	Grants:	Loans:	% of GDP
	69.51	-	5.8

RRF contribution to the Green pillar in Spain (€ 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