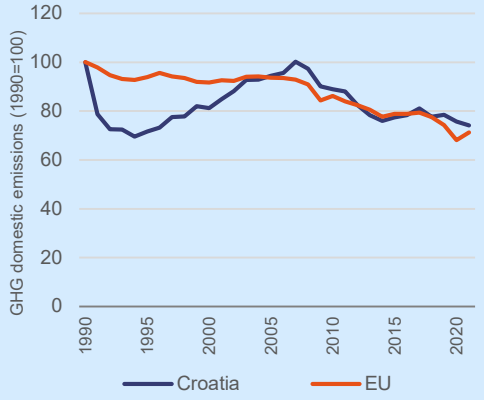
Croatia

1) Key takeaways

- In 2021, GHG emissions in Croatia were 5.6% below 2019 pre-pandemic levels.
- Over the same period, ETS and Effor Sharing emissions decreased by 6.9% and increased by 1.1%, respectively.
- Net GHG emissions (i.e. including LULUCF) in 2021 were 41.9% lower than 1990 levels.
- The LULUCF sector emitted 0.21 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 Croatia were 23.3 MtCO2-eq, 2.1% lower compared to 2020 and 5.6% below pre-pandemic levels. Overall, net domestic emissions, including the Land Use, Land Use Change and Forestry (LULUCF) sector, were 41.9% lower than 1990 levels.



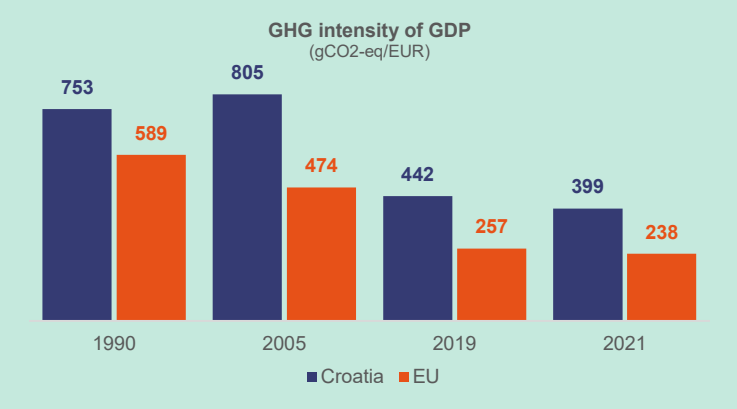
Total domestic GHG emissions

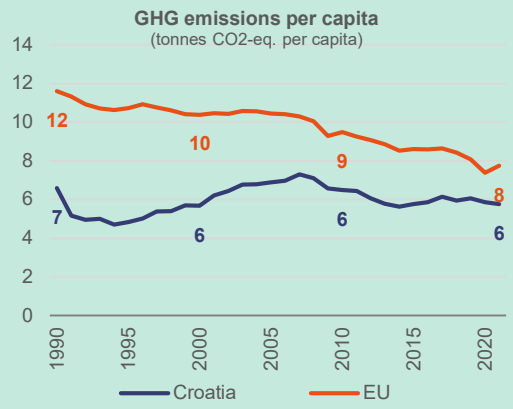
	1990 (MtCO2-eq)	2005 to 1990 (% change)	2019 to 2005 (% change)	2021 to 2019 (% change)	2021 to 1990 (% change)
Croatia	31	-6%	-17%	-6%	-26%
EU	4847	-6%	-21%	-4%	-29%

Total net domestic GHG emissions (including LULUCF)

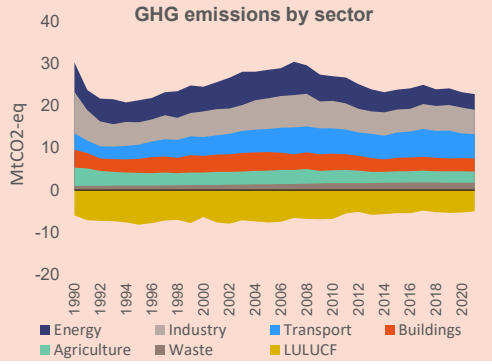
Croatia	25	-30%	-35%	-26%	-42%
EU	4633	-13%	-26%	-10%	-33%

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.





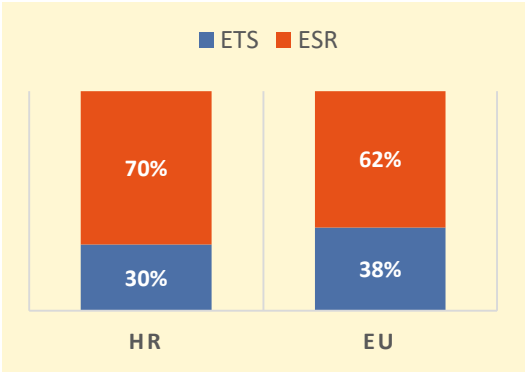
3) Greenhouse gas emissions by sector

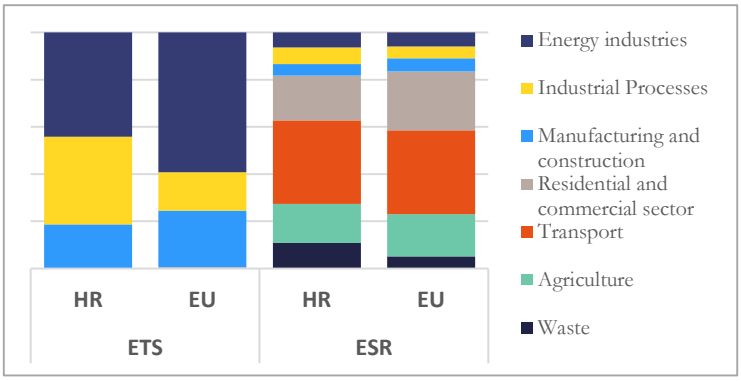


	1990 (MtCO2-eq)	2005 to 1990 (% change)	2019 to 2005 (% change)	2021 to 2019 (% change)	2021 to 1990 (% change)
Energy	7.1	-4%	-43%	-5%	-47%
Industry	9.9	-27%	-16%	-4%	-41%
Transport	3.9	43%	18%	-12%	48%
Buildings	4.2	5%	-30%	-1%	-27%
Agriculture	4.4	-25%	-18%	-1%	-38%
Waste	1.0	34%	33%	-2%	75%
LULUCF	-6.0	29%	-30%	-6%	-16%
International aviation	0.5	-48%	135%	-73%	-67%

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.

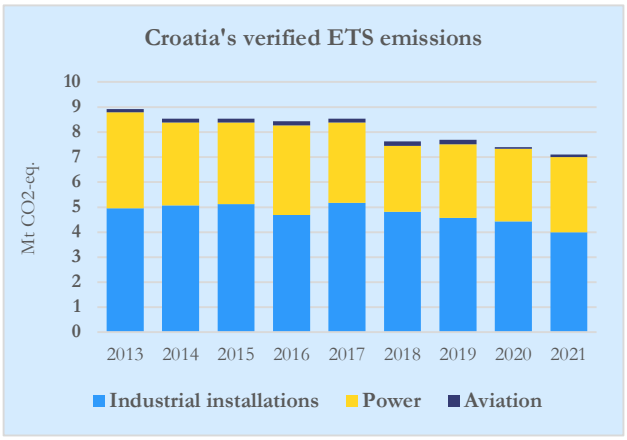
In 2021, the highest contribution to net GHG emissions in Croatia came from the Industry sector (32%), followed by the Transport sector (32%) and the Energy sector (21%). Emissions from sectors under the Effort Sharing Regulation (ESR) were 70% compared to 62% for the EU as a whole (see shares in the charts below).





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

In 2021, stationary installations (e.g. power generation and manufacturing industry) in Croatia emitted 7.0 million tonnes of CO2-eq emissions (equal to 30% of Croatia's total GHG emissions). This is 4.5% lower compared to 2020 and 6.9% below pre-pandemic levels. By 2021, emissions from stationary installations were down by 20.4% against 2013 level (i.e. -43.7% to 2005 levels). Aviation emissions covered by the EU ETS were 45.4% higher compared to 2020 but 39.1% below 2019 level.



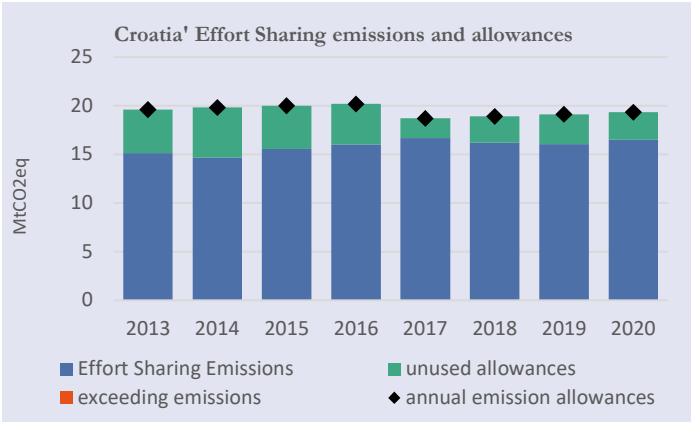
In parallel, Croatia has raised over EUR 0.5 billion in auction revenues since 2013, available for further climate action and energy transformation. Croatia reported that an average of 52% of revenues was spent for climate and energy purposes over the same period.(*)

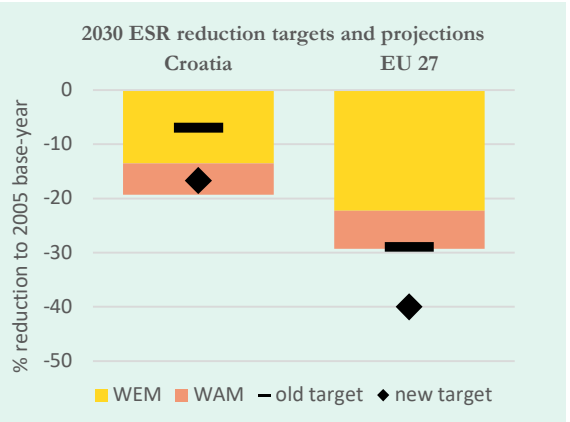
Mt CO2-eq	2013	2020	2021
Power installations	3.8	2.9	3.0
% change since 2013	-	-24.6%	-21.7%
Industrial installations	5.0	4.4	4.0
% change since 2013	-	-10.5%	-19.4%
Aviation (**)	0.12	0.07	0.11
% change since 2013	-	-40.0%	-12.8%

(*) According to the law, 100% of the auctioning revenues are spent on climate and energy. The unspent amount is carried over to the next years.

(**) 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.

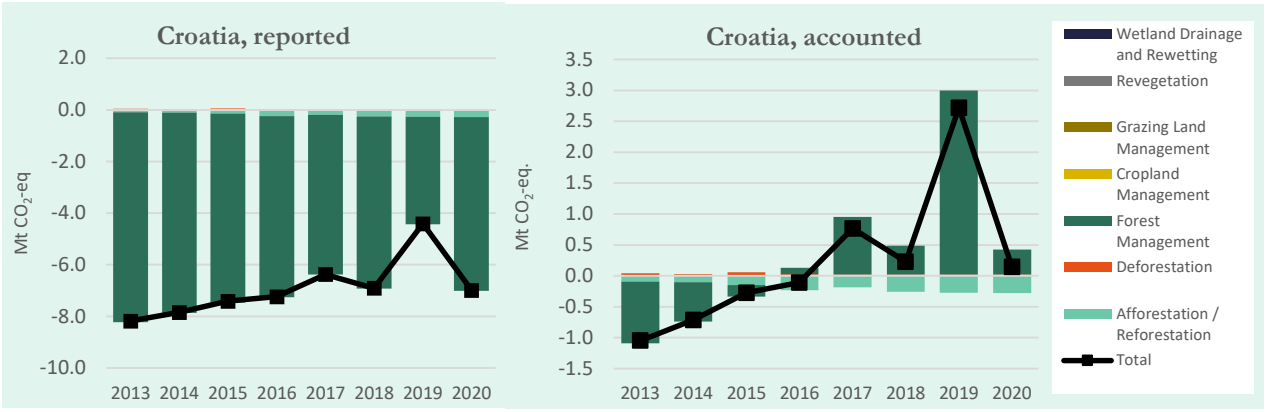
In 2021, effort sharing approximated emissions in Croatia were 16.2 MtCO2eq (equal to 70% of Croatia's total GHG emissions), 1.7% lower than in 2020 but 1.1% higher than 2019 pre-pandemic level.

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

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

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

Reported quantities under the Kyoto Protocol for Croatia show net removals of -6.9 Mt CO2-eq on average per year for the period 2013 to 2020. In this regard, Croatia contributes with 2.2% to the annual average sink of -320.2 Mt CO2-eq of the EU-27. Accounting for the same period depicts net debits of, on average, 0.2 Mt CO2-eq, which corresponds to 0.6% of average EU27 gross debits. Reported net removals show a decreasing trend between 2013 and 2017 and a increase towards 2019 followed by a corresponding decrease in 2020. This pattern is more accentuated for accounted net credits.



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 dominant reported activity is Forest Management with a 6.8 Mt CO2-eq net removal average, although a decrease from -8.13 Mt CO2-eq in 2013 to -6.20 Mt CO2-eq in 2017 is reported. Removals by Afforestation/Reforestation and emissions by Deforestation are negligible in the overall emission budget of the LULUCF sector.

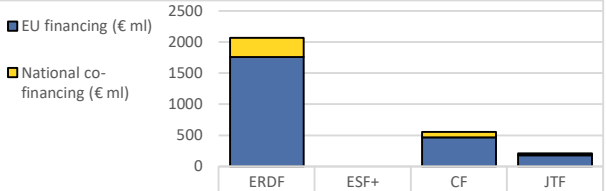
Credits for Afforestation/Reforestation dominate the accounts for all years and increase over time; debits by Deforestation are negligible. Credits by Forest Management reach their peak in 2015 and between 2016-2020 turned into debits. Overall, however, the trend is towards accounted debits.

7) Financing Climate Action

Cohesion policy

Croatia's Planned Financing for Climate Actions

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



	ERDF	ESF+	CF	JTF
National co-financing (€ ml)	310	0	83	32
EU financing (€ ml)	1758	0	468	179
EU Climate amount as a share of EU total financing	34%	0%	41%	100%

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)

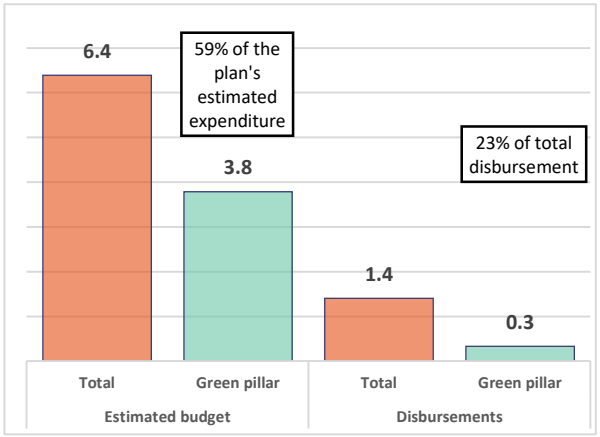
	n.	EUR million
Small Scale Projects	2	9.0
Large Scale Projects	-	-

Modernisation Fund	n.	EUR million
(List of confirmed or approved investment proposals)	5	122

Recovery & Resilience Facilities

RRF allocations (EUR billion)	Grants:	Loans:	% of GDP
	6.30	-	**11.0**

RRF contribution to the Green pillar in Croatia (€ 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