



# Italy

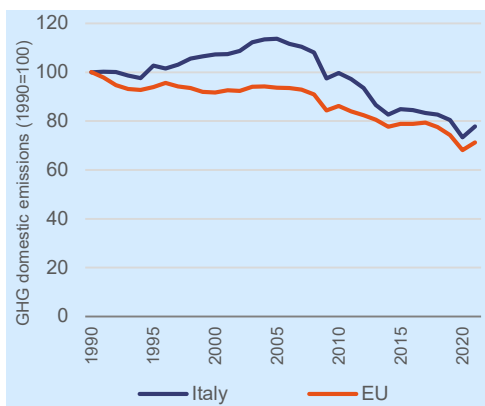
## 1) Key takeaways

- In 2021, GHG emissions in Italy were 3.2% below 2019 pre-pandemic levels.
- Over the same period, ETS and Effor Sharing emissions decreased by 6.7% and by 1.2%, respectively.
- Net GHG emissions (i.e. including LULUCF) in 2021 were 28.6% lower than 1990 levels.
- The LULUCF sector removed 15.28 MtCO<sub>2</sub>-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 Italy were 404.8 MtCO<sub>2</sub>-eq, 6.2% higher compared to 2020 but 3.2% below pre-pandemic levels. Overall, net domestic emissions, including the Land Use, Land Use Change and Forestry (LULUCF) sector, were 28.6% lower than 1990 levels.



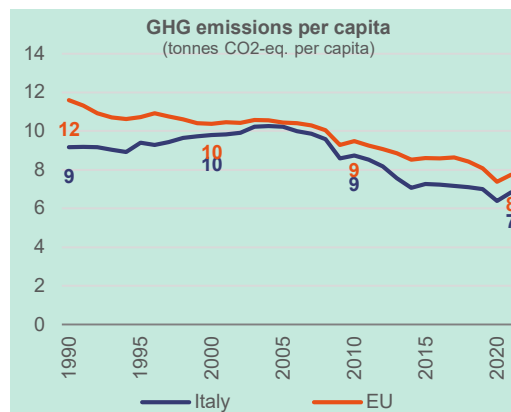
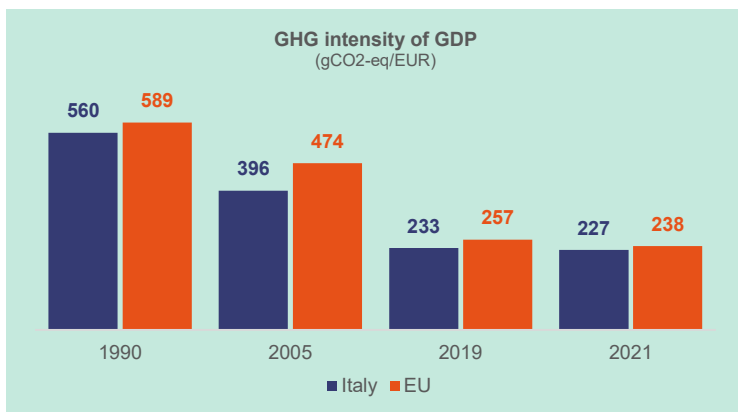
Total domestic GHG emissions

	1990 (MtCO <sub>2</sub> -eq)	2005 to 1990 (% change)	2019 to 2005 (% change)	2021 to 2019 (% change)	2021 to 1990 (% change)
<b>Italy</b>	520	14%	-29%	-3%	-22%
<b>EU</b>	4847	-6%	-21%	-4%	-29%

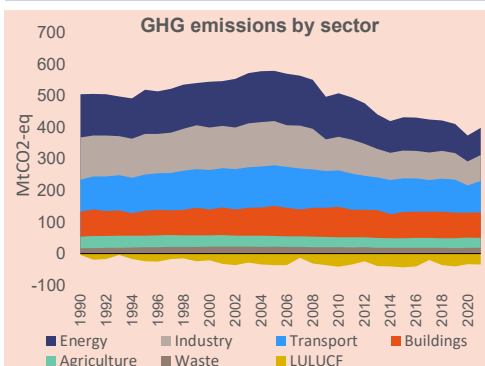
Total net domestic GHG emissions (including LULUCF)

<b>Italy</b>	516	7%	-36%	-11%	-29%
<b>EU</b>	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.



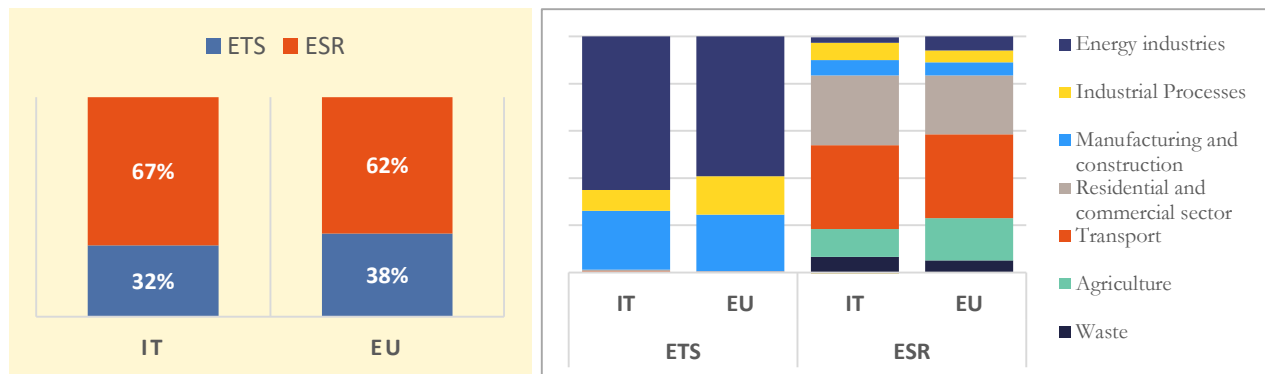
## 3) Greenhouse gas emissions by sector



	1990 (MtCO <sub>2</sub> -eq)	2005 to 1990 (% change)	2019 to 2005 (% change)	2021 to 2019 (% change)	2021 to 1990 (% change)
<b>Energy</b>	137.6	16%	-43%	-6%	-37%
<b>Industry</b>	132.7	5%	-40%	-2%	-38%
<b>Transport</b>	102.2	26%	-18%	-6%	-3%
<b>Buildings</b>	78.9	22%	-16%	0%	2%
<b>Agriculture</b>	36.9	-7%	-8%	3%	-13%
<b>Waste</b>	17.3	26%	-18%	2%	6%
<b>LULUCF</b>	-3.6	866%	15%	-17%	822%
<b>International aviation</b>	4.3	98%	46%	-60%	17%

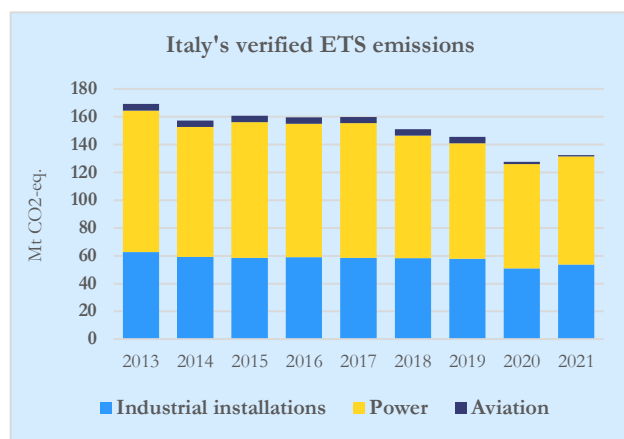
Notes: (1) Energy sector refers to electricity and heat production and petroleum refining. (2) Industry includes fuel combustion in manufacturing and construction and emissions in industrial processes and product use. (3) Buildings include emissions from energy use in residential and tertiary buildings,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

In 2021, the highest contribution to net GHG emissions in Italy came from the Transport sector (27%), followed by the Energy sector (23%) and the Industry sector (22%). 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 Italy emitted 131.4 million tonnes of CO<sub>2</sub>-eq emissions (equal to 32% of Italy's total GHG emissions). This is 4.3% higher compared to 2020 but 6.7% below pre-pandemic levels. By 2021, emissions from stationary installations were down by 20.1% against 2013 level (i.e. -46.9% to 2005 levels). Aviation emissions covered by the EU ETS were 36.2% lower compared to 2020 and 76.7% below 2019 level.

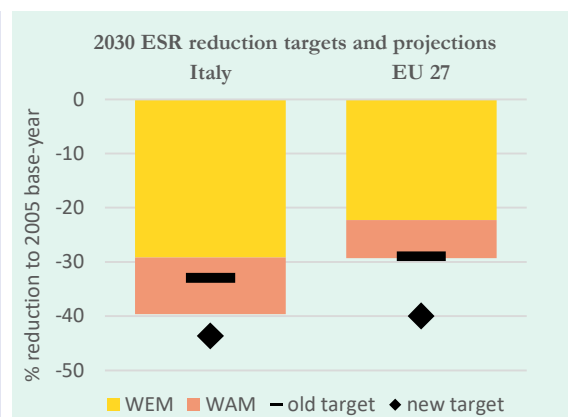
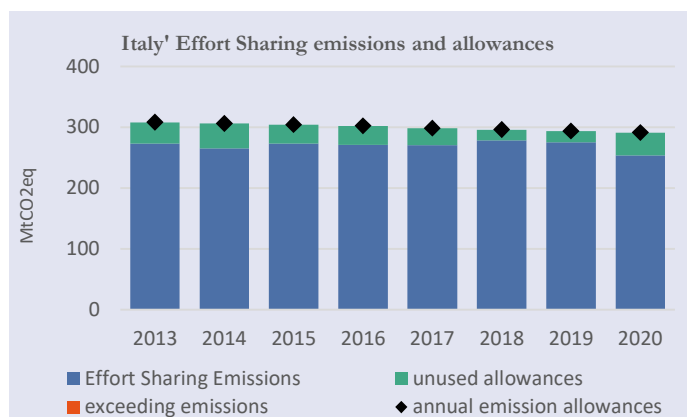


In parallel, Italy has raised over EUR 8.8 billion in auction revenues since 2013, available for further climate action and energy transformation. Italy reported that an average of 34% of revenues was spent for climate and energy purposes over the same period. (\*)

Mt CO <sub>2</sub> -eq	2013	2020	2021
<b>Power installations</b>	101.9	74.9	77.6
% change since 2013	-	-26.5%	-23.9%
<b>Industrial installations</b>	62.6	51.1	53.9
% change since 2013	-	-18.4%	-14.0%
<b>Aviation (**)</b>	4.81	1.69	1.08
% change since 2013	-	-64.9%	-77.6%

(\*) Italian law guarantees that, 50% of the revenues are used for climate and energy but only after the year has ended, which can cause underreported spending. The remaining 50% was initially used to compensate for the depleted phase 2 of the New Entrants Reserve, and later it was allocated to the general budget, which funds, among others, climate and energy projects (not included here). (\*\*) 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 Italy were 271.7 MtCO<sub>2</sub>eq (equal to 67% of Italy's total GHG emissions), 7.0% higher than in 2020 but 1.2% lower than 2019 pre-pandemic level.

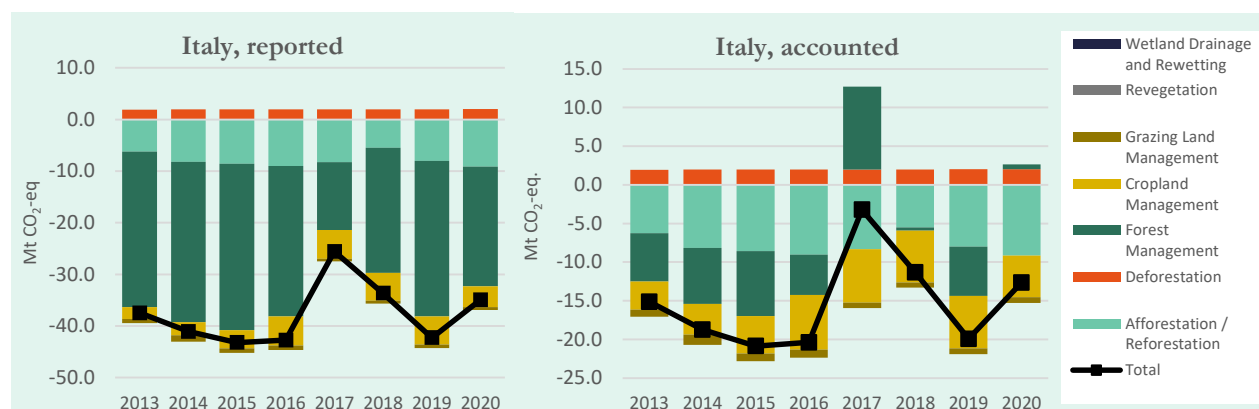
Between 2013 and 2019, Italy's emissions have always been below the annual limits.

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

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



Reported quantities under the Kyoto Protocol for Italy show net removals of -37.6 Mt CO<sub>2</sub>-eq on average per year for the period 2013 to 2020. In this regard, Italy contributes with 11.7% to the annual average sink of -320.2 Mt CO<sub>2</sub>-eq of the EU-27. Accounting for the same period depicts net credits of, on average, -15.3 Mt CO<sub>2</sub>-eq, which corresponds to 18.3% of the EU-27 accounted sink of -83.4 Mt CO<sub>2</sub>-eq. Reported net removals and accounted net credits show a significant dynamic but no clear trend.



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 removals followed by Afforestation/Reforestation and Cropland Management with sizable removal quantities. In the overall emission budget of the LULUCF sector, emissions by Deforestation are small and removals by Grazing Land Management negligible. Removals by Forest Management dropped by more than 50% in 2017 but return to former levels in 2019, followed by a decrease in 2020. Removals by Afforestation/Reforestation show the same pattern but at a lesser scale and continues to increase in 2020. The singular situation in 2017 for Forest Management and Afforestation/Reforestation, but also the following variations, links to the enormous incidence of forest fires which also impacted the EU LULUCF trend. Removals by Cropland Management show a marked increase between 2013 and 2016 that levelled off thereafter.

In terms of accounting, credits by Afforestation/Reforestation are the largest followed by credits by Forest Management for all years except, as mentioned above, 2017 when Forest Management is the largest component by debits and for 2020 when Forest Management generates small debits. Credits by Cropland Managements hold sizable quantities with an increasing trend between 2013 and 2016. Compared to the other activities, debits by Deforestation are small and credits by Grazing Land Management negligible.

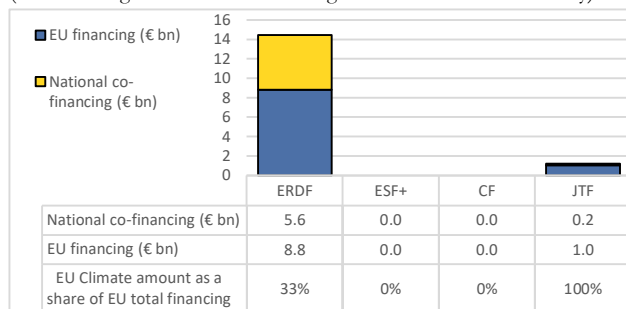
## 7) Financing Climate Action



### Cohesion policy

#### Italy'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	3	9.2
Large Scale Projects	1	117.7

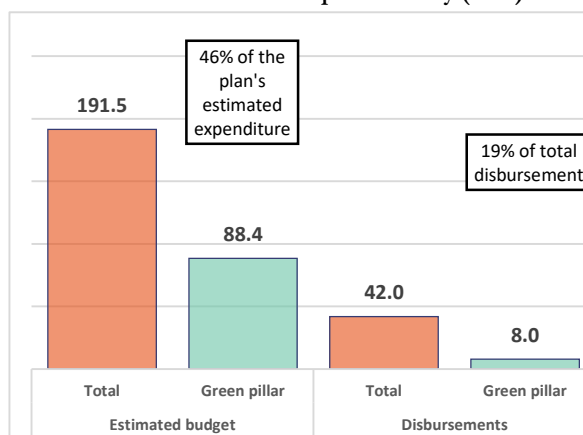
#### Modernisation Fund

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

### Recovery & Resilience Facilities

RRF allocations (EUR billion)	Grants:	Loans:	% of GDP
	68.88	122.60	10.8

#### RRF contribution to the Green pillar in Italy (€ 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](https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/index.html?lang=en)