

# Environmental tax statistics - detailed analysis

Statistics Explained

*Data extracted in October 2023.  
Planned article update: December 2024.*

**" The EU raised € 325.8 billion from environmental taxes in 2021. "**

**" Energy taxes represented more than three-quarters of EU environmental tax revenue in 2021. "**

This article presents the results of a detailed analysis of data on environmental taxes in the [European Union](#) (EU), complementing the article on [Environmental tax statistics](#) . It provides information on the evolution, drivers and payers of environmental tax revenue. Economic instruments like environmental taxes play a crucial role in pollution control and resource management. These tools are becoming increasingly vital in the environmental policies of the European Union (EU) and OECD countries due to their flexibility and cost-effectiveness. They embody the principle that those responsible for pollution should bear the costs of their environmental impact. An environmental tax is a tax whose tax base is a physical unit (or a proxy of it) of something that has a proven, specific negative impact on the environment and which is defined in the European System of Accounts ( [ESA 2010](#) ) as a tax.

## General overview

**In 2021, EU environmental [tax revenue](#) amounted to € 325.8 billion, accounting for 5.4 % of total government revenue from taxes and social contributions (TSC)<sup>1</sup> and 2.2 % of the EU gross domestic product ( [GDP](#) ).**

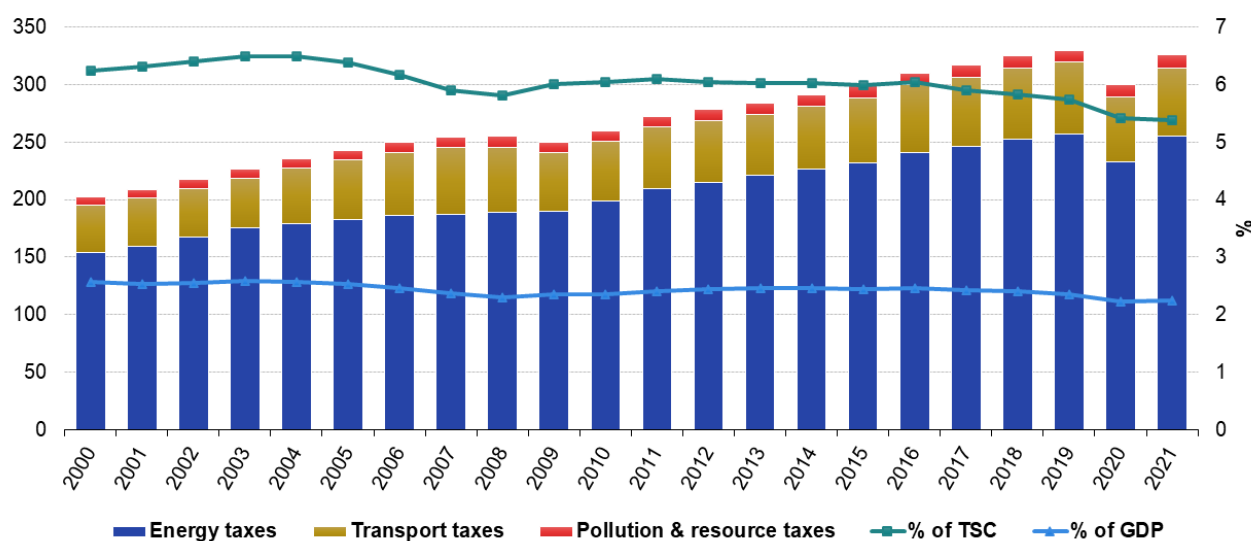
EU environmental tax revenue experienced in 2021 a notable increase of 8.5 % (+€ 25.6 billion) compared with 2020, nearly returning to its 2019 level of € 329.9 billion. From 2000 to 2019, EU environmental taxes displayed a consistent upward trajectory, with an average annual growth of 2.6 %.

In 2021, the EU environmental tax revenue-to-GDP ratio stood at 2.2 %, showing a slight decline of 0.1 % since 2019 and a decrease of 0.3 % from its peak of 2.5 % in 2003. Additionally, in 2021, the share of environmental tax revenue in total government revenue from taxes and social contributions (TSC) was 5.4 %, marking a 0.3 % decrease compared with 2019 and a 1.1 % decrease from its highest point in 2003 and 2004 (6.5 %).

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<sup>1</sup>excluding imputed social contributions

**Environmental tax revenue by type <sup>(1)</sup> and total environmental taxes as share of TSC and GDP <sup>(2)</sup>, EU 2000-2021**  
(€ billion and % TSC and % GDP)



(<sup>1</sup>) left axis.

(<sup>2</sup>) right axis.

The shares of GDP and TSC are calculated using the national tax lists from Oct 2022.

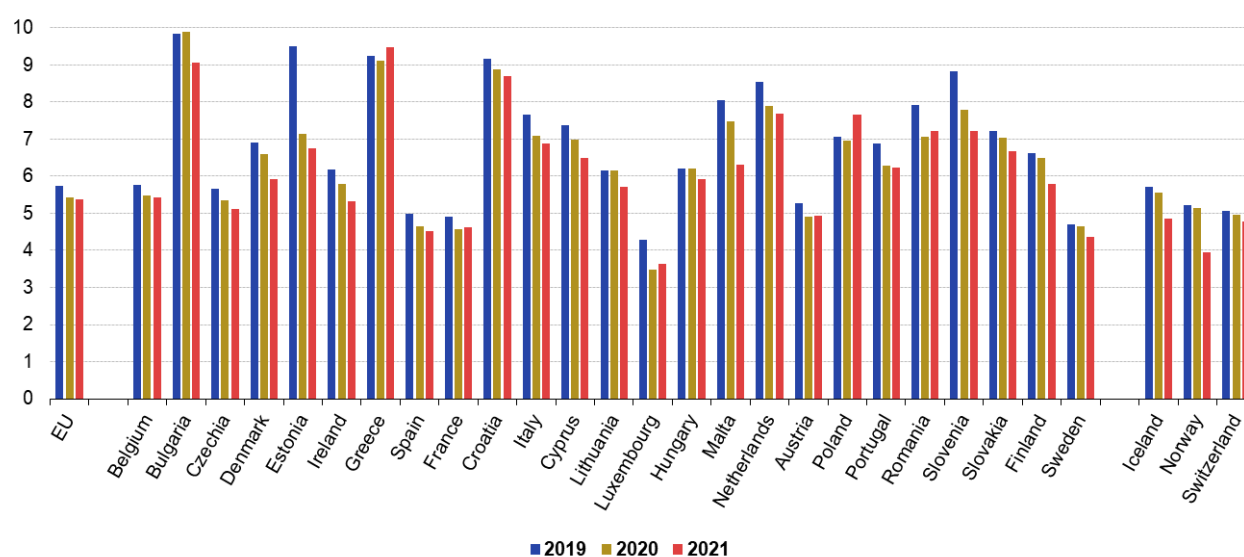
Source: Eurostat (online data codes: env\_ac\_tax, gov\_10a\_taxag)

eurostat

**Figure 1: Total environmental tax revenue in the EU by tax type, 2000-2021** Source: Eurostat (env\_ac\_tax), (nama\_10\_gdp) and (gov\_10a\_taxag)

However, for 2020, there was a substantial decline in total environmental tax revenue of 9 % compared with 2019. This decrease was widespread among EU Member States, with the steepest decreases in environmental taxes in percentage change of total taxes and social contributions (mandatory payments to fund social welfare programs) in Estonia (-2.3 %), Slovenia (-1.0 %), and Romania (-0.8 %). Only one EU Member State saw an increase in environmental taxes between 2019 and 2020: Bulgaria (+0.04 %). In 2021, EU environmental taxes rebounded with an 8.5 % increase. Among EU Member States, the median growth in environmental taxes from 2020 to 2021 was 8.2 %. For environmental taxes in percentage change of total taxes and social contributions, Poland recorded the highest increase at 0.7 %, followed by Greece at 0.3 % and Luxembourg at 0.1 %. The largest decreases were observed in Malta at 1.1 % and Bulgaria at 0.8 % in percentage change of total taxes. (Figure 1b)

## Environmental taxes, % change of total taxes and social contributions, 2019, 2020 and 2021



Source: Eurostat (online data code: env\_ac\_tax)

eurostat

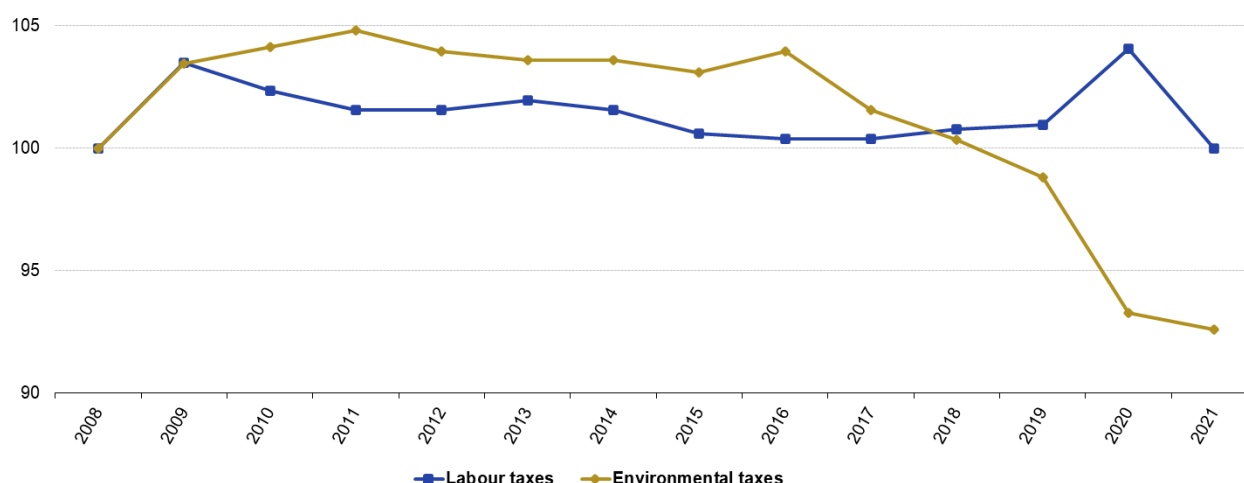
**Figure 1b: Environmental taxes, % change of total taxes and social contributions for 2019, 2020, 2021**  
Source: Eurostat (env\_ac\_tax), (nama\_10\_gdp) and (gov\_10a\_taxag)

The European Green Deal acknowledges the crucial role of taxation in the transition towards a greener and more sustainable European growth and the need to better align the taxation systems with EU climate objectives. Well-designed tax reforms can indeed boost economic growth, help reduce greenhouse gas emissions by ensuring an effective carbon pricing and contribute to a fair transition.

The [Roadmap to a Resource Efficient Europe](#) (European Commission, 2011) included the following milestone: by 2020, a major shift from taxation of labour towards environmental taxation will lead to a substantial increase in the share of environmental taxes in government revenue, in line with the best practice of EU countries.

With the downward trend observable for the ratio of environmental taxes to total tax revenue, no major progress has been made in the implementation of the resource efficiency policy objective. Even though the equivalent ratio for labour taxes already started to fall during the financial crisis (2009), both shares declined from 2011 to 2015. With labour taxation remaining rather stable in recent years and environmental taxes significantly decreasing since 2016, both shares reached, in 2018, a similar level as recorded in 2008 (for details, see Figure 2). Environmental taxes-to-total-taxes and social contributions ratio, however, continued its downward trend until 2020, whereas the ratio for labour taxes retained the level from the previous year in 2019 and increased in 2020. However, the share of labour taxes equalled 53.5 % of total taxation in 2020, almost ten times the share of environmental taxes (5.4 % of total taxation). Figure 2 shows the trend and the situation for 2021.

## Taxes on labour and environmental taxes as share of total taxation, EU 2008-2021 (index 2008=100)



Source: Eurostat (online data codes: env\_ac\_tax), DG TAXUD

eurostat

**Figure 2: Taxes on labour and environmental taxes as share of total taxation (index 2008=100) Source: Eurostat (env\_ac\_tax), DG TAXUD**

## Energy taxes stand out as the major source of EU environmental tax revenue

### Energy taxes represent more than three-quarters of EU environmental tax revenue in 2021

Environmental tax revenue is broken down into four main categories: (i) energy taxes, (ii) transport taxes, (iii) pollution taxes and (iv) resource taxes. Given the small share of pollution and resource taxes in total environmental tax revenue and the problems in assigning some minor national taxes to one of the tax categories, these two types of taxes have been grouped together in this article when presenting the structure of the environmental taxes.

Energy taxes include taxes on energy products (e.g. coal, oil products, natural gas and electricity) used for both stationary purposes and transport purposes. In 2021, the vast majority of environmental tax revenue (78.4 %) came from energy taxes. By convention, CO<sub>2</sub> taxes are also included in this tax category as they are usually levied on energy products.

It should be noted that the energy taxes for some countries do not include the levies imposed within the ring-fenced schemes to finance the transition to other renewable energy sources, e.g. the [German Renewable Energy Sources Act \(EEG\)](#).

Transport taxes mainly include taxes related to the ownership and use of motor vehicles. In 2021, transport taxes were the second largest source of environmental tax revenue in the EU, accounting for 18.1 % of the total.

Pollution and resource taxes cover different types of taxes: taxes on the extraction of raw materials, on measured or estimated emissions to air (e.g. NO<sub>x</sub>, SO<sub>2</sub>) and water, on noise and on the management of waste. Only 3.5 % of EU total environmental tax revenue was raised from pollution and resource taxes in 2021.

Since 2002, distribution of the tax categories has remained around the same, with little to no changes (by less than 2 pp) in the share of energy taxes, transport taxes and pollution/resource taxes in total. As energy tax revenue accounts for around 78 % of environmental taxes, its development determines to a large extent the trend for the total revenue of environmental taxes. In 2021, EU revenue from energy taxes (in nominal terms) increased by 9.9 % compared with its value in 2020. In the same period, the EU revenue from transport taxes increased by 3.4 %, while the EU revenue from pollution and resource taxes increased by 7.6 %. Developments at EU country level are different: Poland energy taxes registered an increase of 28.3 % from 2020 to 2021, followed by Luxembourg with an energy taxes increase of 18.5 %. On the other side, Iceland energy taxes decreased by 15.1 %, between 2020 and 2021. Transport taxes show even more variability between EU countries: transport taxes between 2020 and 2021

increased by 35.6 % in Lithuania, followed by Romania with 21.9 % but decreased by 12.1 % in Finland and by 11 % in Malta. Pollution and resource taxes represented 3.5 % of the total environmental taxes at EU level. This share remained small, in 2021, for many countries, except in the Netherlands (14.1 % of total environmental taxes), Malta and Hungary (both around 10 %), as well as in Iceland (24.1 %). In 2020, the contribution of households as tax payers remained equivalent to the contribution of corporations: the total environmental taxes fell on households at 48.6 % and on corporations at 47.6 %. However, among the different environmental taxes, corporations contributed 52 % to the energy taxes, while households contributed 68.2 % to the transport taxes.

#### Total environmental tax revenue by type of tax and tax payer, EU 2020 and 2021

	Million euro	% of total environmental taxes	% of GDP	% of total government revenue from taxes and social contributions (TSC)	% of (specific type of) environmental tax revenue (by tax payer)		
	2021				2020		
					Corporations	Households	Non-residents
<b>Total environmental taxes</b>	325 837	100.0	2.24	5.38	47.6	48.6	3.8
<b>Energy taxes</b>	255 297	78.4	1.76	4.21	52.0	43.3	4.6
<b>Transport taxes</b>	59 066	18.1	0.41	0.97	31.0	68.2	0.8
<b>Taxes on Pollution/Resources</b>	11 474	3.5	0.08	0.19	42.0	56.8	1.2

Note:

The shares by 'payer' do not necessarily add up to 100% owing to a small share of 'not allocated taxes'.

The shares of GDP and TSC are calculated with the taxes reported in the national tax lists from Oct 2022.

Source: Eurostat (online data codes: env\_ac\_tax and env\_ac\_taxind2)



**Table 1: Total environmental tax revenue by type of tax and tax payer, EU, 2020 and 2021** Source: Eurostat (env\_ac\_tax) and (env\_ac\_taxind2)

#### CO<sub>2</sub>taxes as a distinct sub-category of energy taxes

CO<sub>2</sub>taxes or carbon taxes are levied on the carbon content of fossil fuels. While all energy taxes increase the price of energy products, CO<sub>2</sub>taxes must have a clear tax base (carbon content), which makes this type of tax distinct compared with other energy taxes. Consequently, a CO<sub>2</sub>tax provides an incentive to use a fuel with lower carbon content.

CO<sub>2</sub>taxes are regarded as a borderline case between energy and pollution taxes. However, they are recorded as energy taxes in EU statistics given that they are levied on energy products and have usually been introduced as a substitute for other energy taxes. The revenue from these taxes can be substantial compared with the revenue from pollution taxes and the recording of CO<sub>2</sub>taxes with pollution taxes would distort both the time series at national level and for international comparison.

In recent years, several EU countries have introduced a carbon tax which ranges from less than € 1 per metric ton of carbon in Poland to over € 110 in Sweden, Liechtenstein and Switzerland. Such taxes are also levied in 14 EU Member States and in the four [European Free Trade Association](#) (EFTA) countries. Apart from country-specific levies, the EU CO<sub>2</sub>taxes also cover government revenue from the auctions of emission permits under the EU Emissions Trading System (EU ETS), which is recorded by all EU Member States.

#### Emission permits

The payments collected by EU Member States for emission permits (emission allowances) are one example of CO<sub>2</sub>taxes. Under the European System of Accounts 2010 (ESA 2010), i.e. the accounting standards underpinning compilation of macro-economic statistics (National Accounts), the ETS auction revenues are recorded as taxes. Please note that ESA 2010 accounting rules are followed for compilation of all the taxation data presented in this article, including the ETS revenue described in this section.

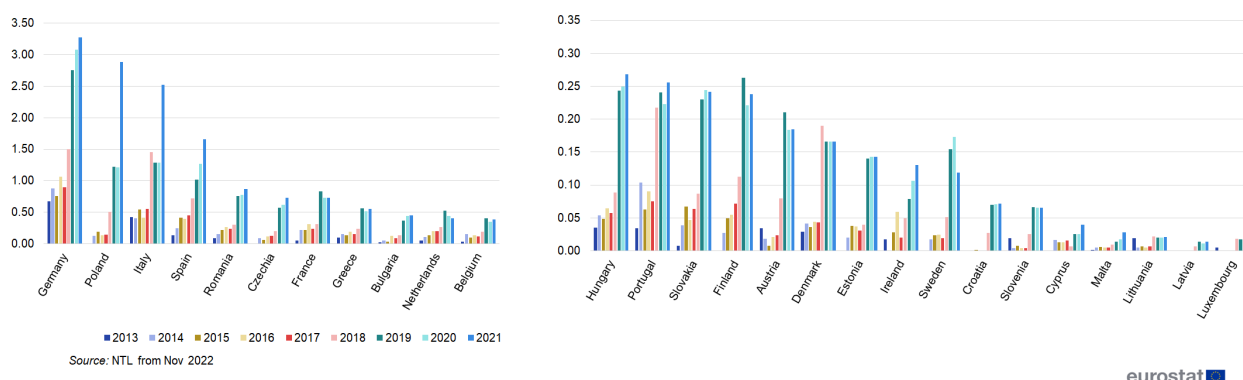
Governments are increasingly using such emission trading systems, based on a cap and trade principle, to control

total CO<sub>2</sub> emissions. The EU ETS was introduced in 2005 and, up to 2012, governments allocated allowances for free. However, auctioning has been the default method for allocating allowances within phase 3 (2013-2020) of the EU ETS. In 2013, over 40 % of the allowances were auctioned. This proportion has been increasing over recent years and is expected to further increase. In phase 4 of the EU ETS (2021-2030), the overall number of emission allowances will further decline. The system of free allocation will be re-focused on sectors at the highest risk of relocating their production outside of the EU. These sectors will receive 100 % of their emission permits for free. For less exposed sectors, free allocation is foreseen to be phased out after 2026. A considerable number of free allowances will be set aside for new and growing installations.

Under ESA 2010, governments should record the proceeds from an auction of emission trading allowances as other taxes on production (D.29) and on an accrual basis (i.e. at the time of CO<sub>2</sub> emissions covered by a permit, meaning only in the year when the permits are used (surrendered) and not when they are auctioned).

Total CO<sub>2</sub> tax revenue relating to EU ETS allowances reported by EU countries amounted to € 16.5 billion in 2021. In comparison, the value in the preceding years was significantly lower, ranging from € 3.0 billion to € 3.8 billion per year in the period 2014-2017, € 6.8 billion in 2018 before almost doubling to 12.2 billion in 2019. In 2020, the value of tax revenue related to EU ETS allowances remained stable, representing a share of around 6.4 % of the total revenue from energy taxes in the EU. Germany recorded by far the largest tax revenue from emission permits in the EU (€ 3.3 billion in 2021), followed by Poland (€ 2.9 billion), Italy (€ 2.5 billion) and Spain (€ 1.7 billion) (see Figure 3).

**Total tax revenue from auctioning of emission allowances as reported by EU Member States, 2013-2021**  
(€ billion)



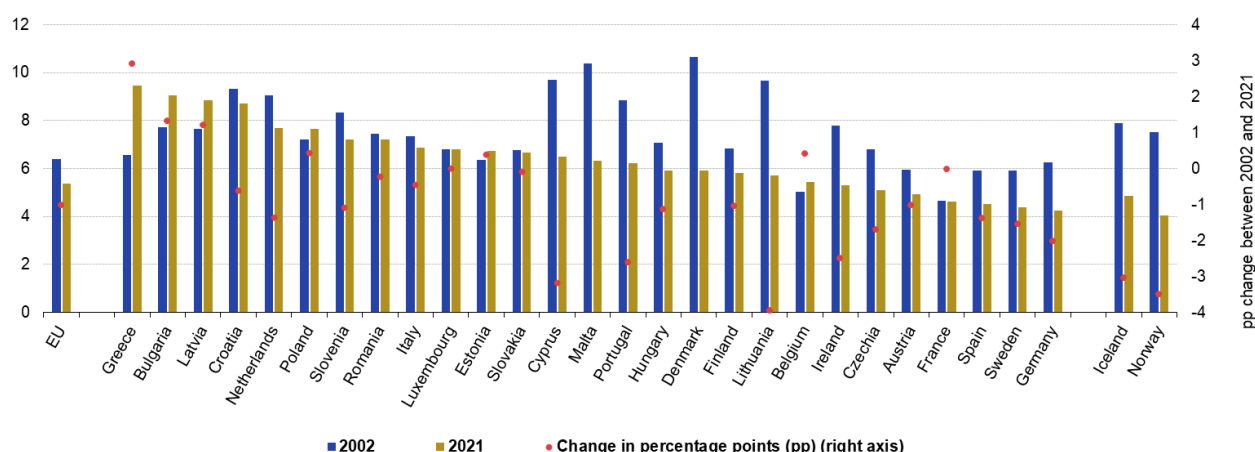
**Figure 3: Total tax revenue from auctioning of emission allowances as reported by Member States, 2013-2021 (billion euro) Source: Eurostat (National tax lists)**

## Evolution of environmental tax revenue in Europe between 2010 and 2021

**For the majority of EU Member States the share of environmental taxes in total taxes and social contributions (TSC) decreased from 2002 to 2021 by -1.7 % on average with the lowest value in Lithuania (-4.0 %).**

Figure 4 compares the share of environmental taxes in TSC for 2002 with that of 2021. In 21 EU Member States the share decreased, whereas for six countries, it increased. The highest increase is observed in Greece with +2.9 pp, followed by Bulgaria and Latvia (over +1 pp) and Poland and Belgium with around +0.4 pp. Between the countries with a descending trend, Lithuania recorded the highest decrease between 2002 and 2021 from 9.7 % to 5.7 % of TSC, i.e., by 4.0 pp, followed by Cyprus, with a decrease of 3.32 pp (from 9.7 % to 6.5 %). For changes from 2002 to 2021, see the dots and the axis on the right.

## Environmental taxes as a share of total taxes and social contributions, 2002 and 2021 (% in TSC and change in percentage points)



Source: Eurostat (online data code: env\_ac\_tax)

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**Figure 4: Environmental taxes as a share of total taxes and social contributions, 2002 and 2021 (% in TSC and change in percentage points)** Source: Eurostat (env\_ac\_tax)

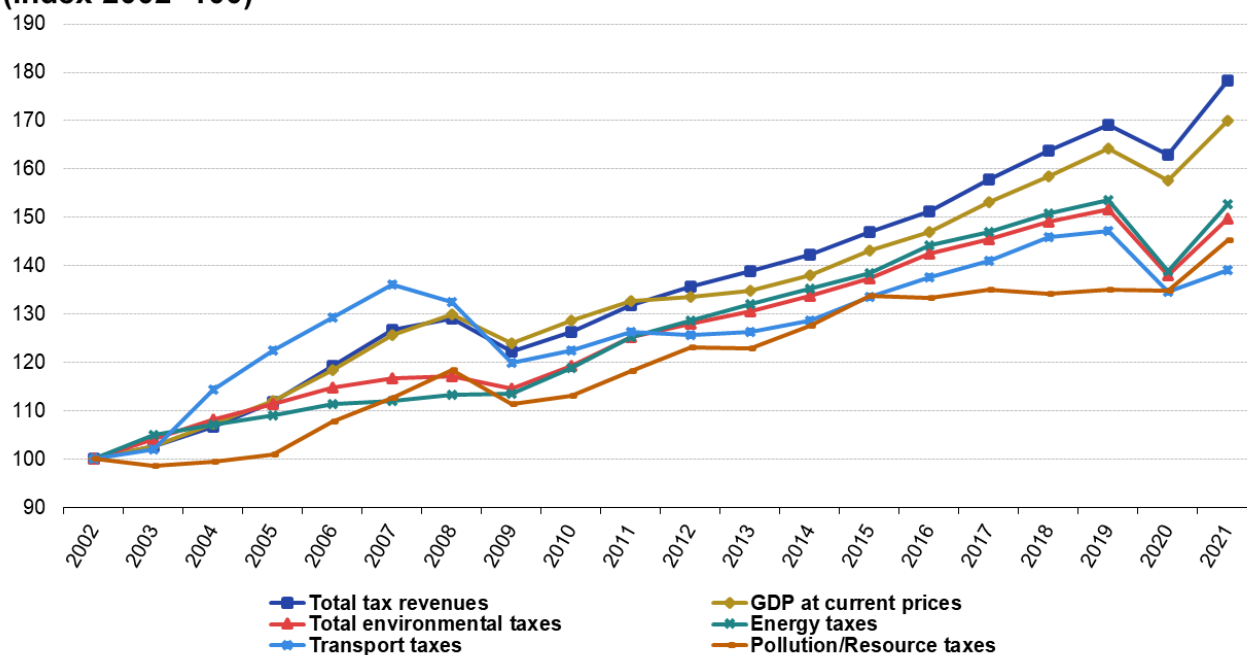
## Main drivers behind the evolution of environmental taxes

This section focuses on how environmental tax revenue and its main components - energy taxes and transport taxes - have evolved, compared with recent developments in the EU economy as a whole and the key related economic and fiscal indicators.

Figure 5 outlines the trend in GDP, total tax revenue, energy taxes, transport taxes and pollution/resource taxes from 2002 to 2021. The metrics are all indexed for comparability.

In 2020, the Covid-19 pandemic reversed the upward trend of 2009-2019 when all environmental taxes were affected except the pollution/resource tax. However, the upward trend resumed again in 2021. Total tax revenues increased in 2021 by 15.3 pp compared with 2020. The development of environmental taxes is not as high with an increase of 11.8 pp. This increase is mainly due to the energy taxes which increased by 13.7 pp in 2021 compared with 2020. Energy taxes increased at a faster pace than GDP in the last year. The component of transport taxes within the environmental taxes increased less by 4.5 pp compared with 2020.

## Development of GDP, total tax revenue, energy, transport and pollution/resource tax revenue, EU 2002 - 2021 (index 2002=100)



Source: Eurostat (online data codes: env\_ac\_tax, nama\_10\_gdp)

eurostat

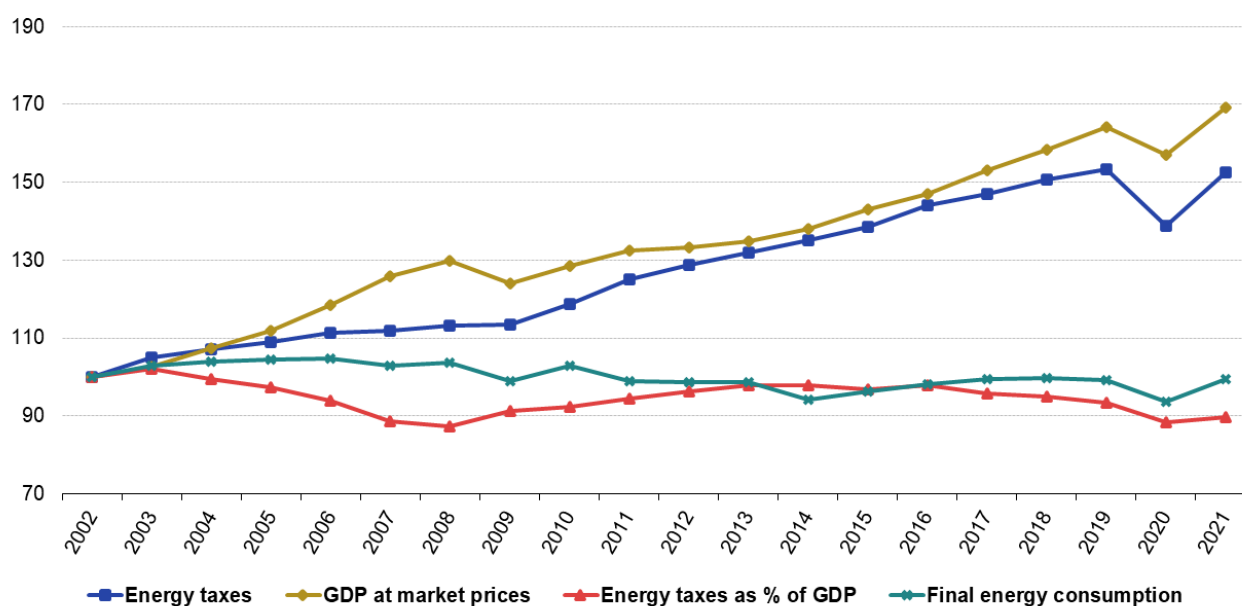
**Figure 5: Development of GDP, total tax revenue, energy-, transport- and pollution resource tax revenue, 2002 - 2021 (index 2002=100)** Source: Eurostat (env\_ac\_tax) and (nama\_10\_gdp)

### Evolution of energy taxes and the implicit tax rate (ITR) on energy

From 2016-2019 EU energy tax revenue-to-GDP decreased by 4.6 pp, then decreased by 5.1 pp in 2020. However, in 2021, energy tax revenue-to-GDP ratio increased by 1.5p pp.



## Energy taxes, GDP and final energy consumption, EU 2002-2021 (index 2002=100)



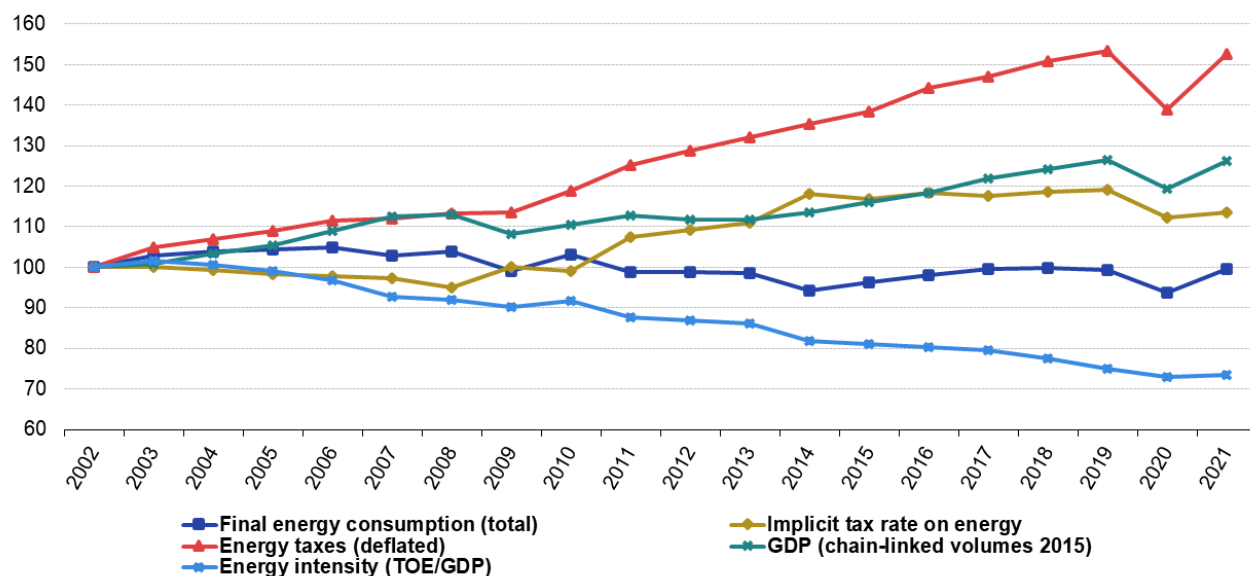
Source: Eurostat (online data codes: env\_ac\_tax, nrg\_bal\_s, nama\_gdp\_k)

eurostat

**Figure 6: Energy taxes, GDP and final energy consumption, EU, 2002-2021 (index 2002=100)** Source: Eurostat (env\_ac\_tax), (nama\_10\_gdp) and (nrg\_bal\_s)

Energy intensity is calculated as the ratio between the sum of inland consumption of solid fuels, oil, gas, nuclear and renewable energy sources and GDP. The indicator is expressed in chain-linked volumes of GDP as it allows for a better comparison between different time periods (see Figure 7). Since 2002, energy intensity has gradually decreased, dropping by almost 27 % in 2020, with the trend mainly driven by an overall rise in the GDP over this period, except after the financial crisis of 2007-2008 and the Covid-19 pandemic in 2020. The relation between the deflated revenue from energy taxes and final energy consumption illustrates the implicit tax rate (ITR) on energy. It should be noted that final energy consumption has remained at a rather constant level since 2002, with only minor fluctuations up to 2017 and a sharper decrease in 2020. Final energy consumption measures the total energy consumed by end users, such as households, industry and agriculture. It is the energy which reaches the final consumer's door and excludes that which is used by the energy sector itself. Consequently, in the years under examination, the evolution of ITR is mainly driven by the development of energy taxes.

## Final energy consumption, Implicit tax rate on energy, Energy taxes, GDP and Energy intensity, EU 2002-2021 (index 2002=100)



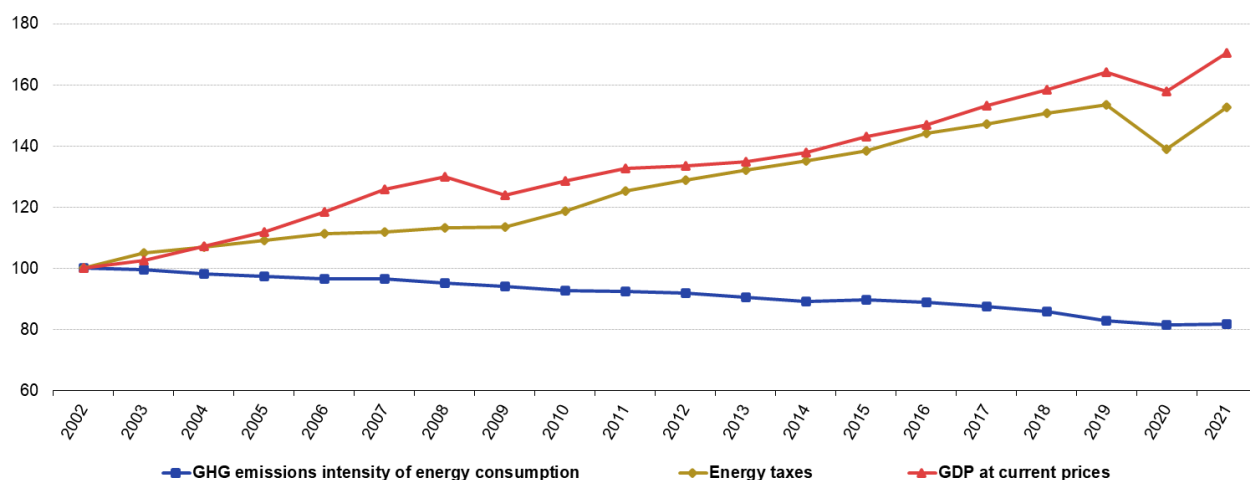
Source: Eurostat (online data codes: env\_ac\_tax, ten00120, nama\_10\_gdp, nrg\_100a, nrg\_ind\_ei)

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**Figure 7: Final energy consumption, implicit tax rate on energy, energy taxes, GDP and energy intensity, 2002-2021, EU (index 2002=100)** Source: Eurostat (env\_ac\_tax), (ten00120), (nama\_10\_gdp), (nrg\_100a) and (nrg\_ind\_ei)

Figure 7b shows the time series (2002-2021) for energy taxes, greenhouse gas emissions intensity of energy consumption, and GDP for the EU. The metrics are all indexed for comparability (index 2001=100). Greenhouse gas emissions intensity of energy consumption is calculated by determining the ratio between energy-related GHG emissions and gross inland consumption of energy.

## Greenhouse gas emissions intensity of energy consumption, energy taxes and GDP (index 2002=100)



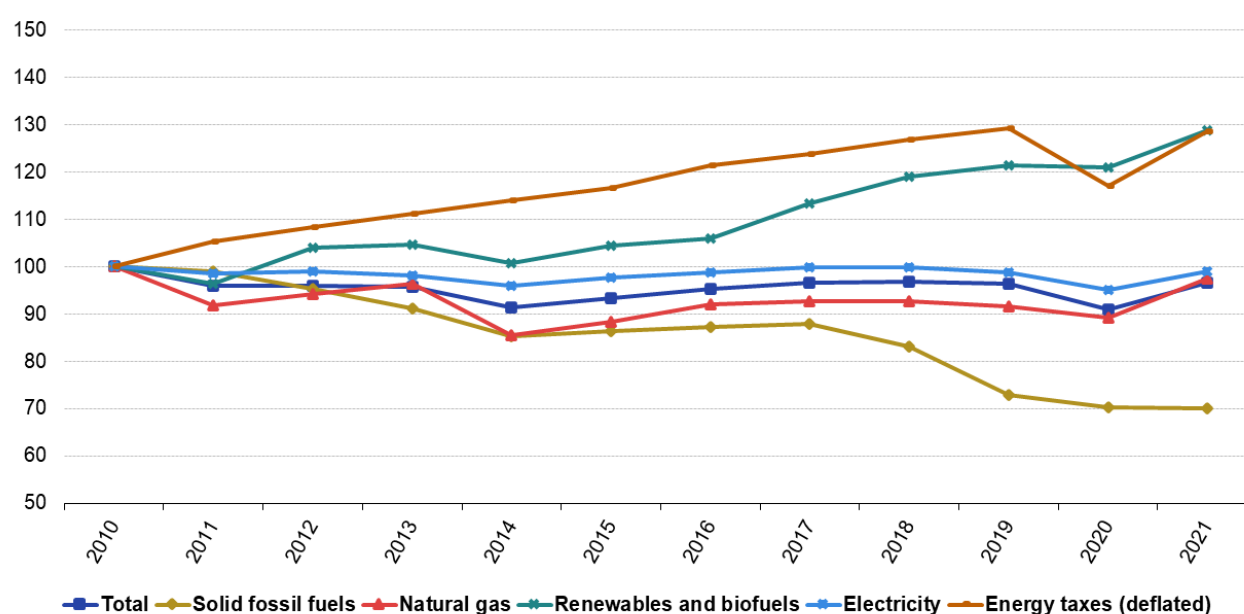
Source: Eurostat (online data code: sdg\_13\_20)

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**Figure 7b: Greenhouse gas emissions intensity of energy consumption, Energy taxes and GDP, 2002-2021, EU (index 2001=100)** Source: Eurostat (env\_ac\_tax) and (nrg\_100a)

The final consumption of energy products and energy taxes for the EU is shown in Figure 8. The consumption of solid fossil fuels dropped by 16 % from 2010 to 2014 and after three rather stable years, significantly fell again from 2017 to 2020 by another 19 %. By comparison, consumption of renewable energy and biofuels increased by 32 % between 2009 and 2020 and did not show any reversed trend in 2020. After a steady increase until 2019, energy taxes (deflated value) decreased sharply in 2020 by 13 pp, returning to its 2010 level. The consumption of electricity and natural gas remained stable over the whole time period, despite the Covid-19 pandemic.

**Final consumption of energy products and energy taxes (deflated),  
EU 2010-2021 (index 2010=100)**

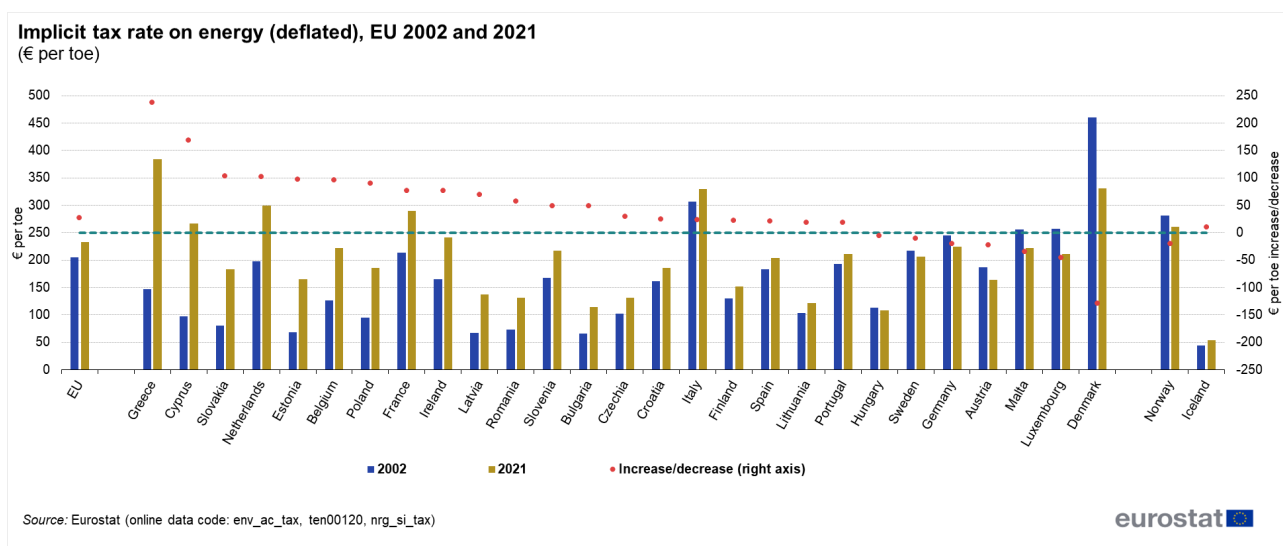


Source: Eurostat (online data code: env\_ac\_tax, ngg\_bal\_s, ten00123, nrg\_100a, nama\_10\_gdp)

eurostat

**Figure 8: Final consumption of energy products and energy taxes (deflated), 2010-2021, EU (index 2010=100)**  
Source: Eurostat (env\_ac\_tax) and (nrg\_100a)

Given the subdued growth of energy taxes in the period after 2009, the ITR on energy for the EU also increased between 2009 and 2021, from € 205 to € 232 per TOE (see Figure 9). The ITR and its changes vary significantly across the EU. The highest levels of ITR in 2021 were in Greece (more than € 150 per TOE higher in 2021 than the EU average), Denmark, Italy (around € 100 per TOE higher in 2021 than the EU average) and the Netherlands. The lowest levels of ITR are in Romania, Lithuania, Bulgaria and Hungary (in 2021 below the EU average by more than € 100 per TOE). The ITR increased in 2021 from 2002 levels in most of the EU countries (with the highest increase of € 236 per TOE in Greece, followed by € 168 per TOE in Cyprus and € 103 per TOE in Slovakia). By contrast, the tax rate significantly decreased in Denmark by € 130 per TOE, Luxembourg (-€ 46 per TOE) and Austria (-€ 23 per TOE).

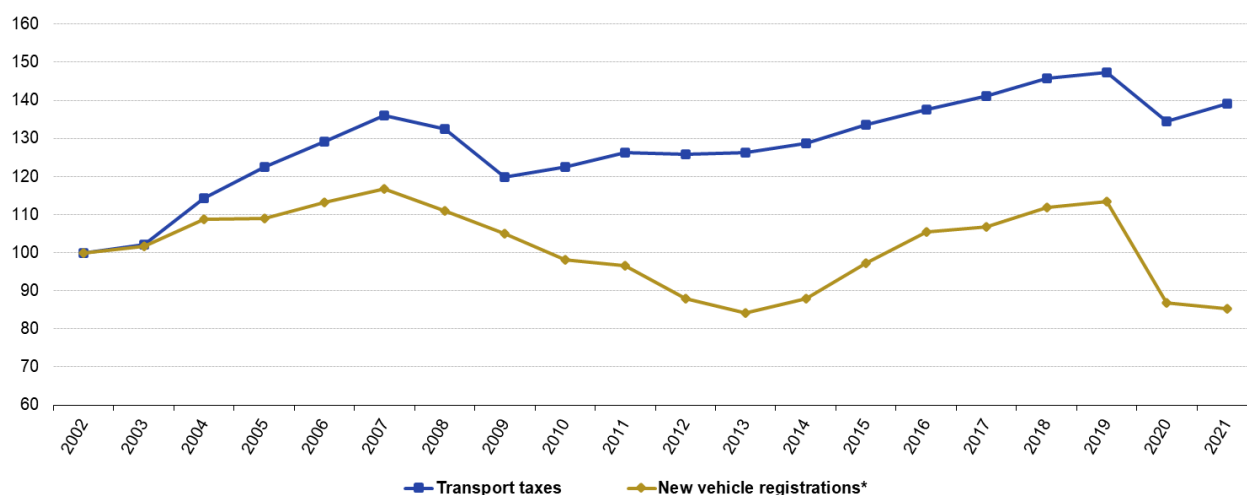


**Figure 9: Implicit tax rate on energy (deflated), 2002 and 2021 (€ per TOE) Source: Eurostat (env\_ac\_tax)**

### Evolution of transport taxes

Transport taxes are levied mainly on vehicles when they are sold (e.g. sales taxes) and then for each year they are licensed for use on the road (e.g. circulation tax). As a result, the revenue from transport taxes tends to follow the dynamics of vehicle sales and vehicle stocks. These two factors might then partly explain the reduction in transport tax revenue observed after the two main economic crises in the last two decades: the drop after 2007 and the drop in 2020 due to the Covid-19 pandemic. The number of new vehicle registrations in the EU also decreased between 2007 and 2013 (see Figure 10). In countries with high car sales taxes, the economic downturn following the financial crisis impacted on car sales and therefore on revenue from such taxes. However, demand started to pick up again from 2014, surpassing pre-crisis levels by 23 % in 2019. But the economic downturn in 2020 impacted car sales again and its revenue from taxes. In 2020, the demand returned to the level of 2014.

### Transport tax revenue and new vehicle registrations (passenger cars), EU 2002-2021, (index 2002=100)



\* Data gaps completed with estimations

Source: Eurostat (online data codes: env\_ac\_tax, road\_eqr\_carmot)

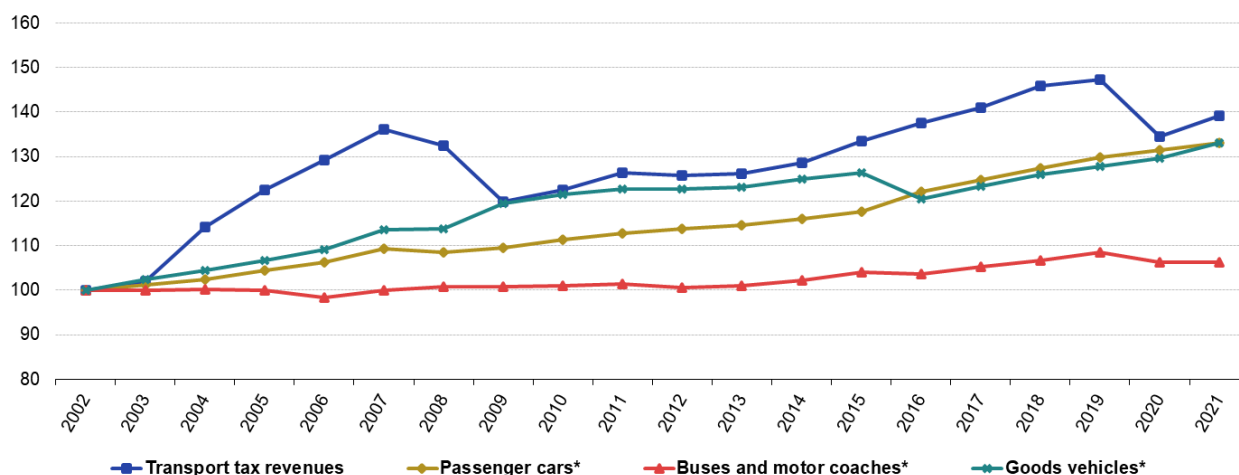
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**Figure 10: Transport tax revenue and new vehicle registrations (passenger cars), EU, 2002-2020 (index 2002=100) Source: Eurostat (env\_ac\_tax) and (road\_eqr\_carmot)**

Overall, as illustrated in Figure 11, the stock of goods vehicles (+38 %), passenger cars (+29 %) and buses and

coaches (+12 %) increased in the period 2002-2020. An impact of the financial and economic crisis on the number of vehicles in circulation is also visible over the years 2007-2009, when the stock of some types of vehicles remained nearly unchanged or decreased.

**Transport tax revenues and vehicle stock (passenger cars, buses and motor coaches, goods vehicles), EU 2002-2021 (index 2002=100)**



\* Data gaps completed with estimations  
Source: Eurostat (online data codes: env\_ac\_tax, tran\_r\_vehst)

eurostat

**Figure 11: Transport tax revenues and vehicle stock (passenger cars, buses and motor coaches, goods vehicles), EU, 2002-2020 (index 2002=100) Source: Eurostat (env\_ac\_tax) and (tran\_r\_vehst)**

## Environmental taxes by payer

### Resident households and corporations with nearly equal contributions in the energy tax revenue

Within the EU, corporations made up 47.4 % of the total energy tax revenue collected by governments in 2021, with households contributing just 0.4 % more at 47.8 %.

Among the EU Member States Luxembourg notably had the highest proportion of energy tax revenue (56.9 %) gathered from non-residents, largely stemming from the purchases of petrol and diesel by non-residents. Malta also recorded a substantial share of 43.2 %, followed by Austria (21.6 %).

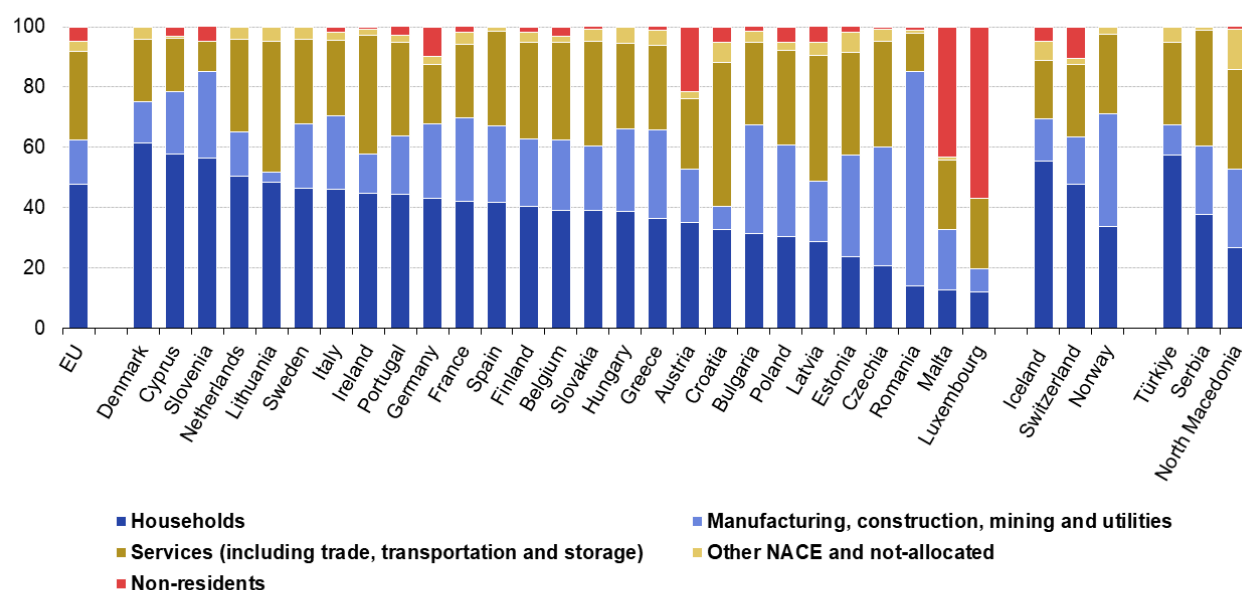
In 2021, households paid around 60 % or more of the total energy taxes in Denmark (61.4 %), Cyprus (57.8 %), as well as in Türkiye (57.5 %), see Figure 12.

The services sector, encompassing areas like transportation and trade, accounted for 29.4 % of the EU energy tax revenue, with Croatia and Latvia reporting shares exceeding 40 %. Beyond the EU, in Serbia, the services sector contributed to approximately 38.2 % of energy taxes.

Manufacturing, construction, mining, and utilities together generated 14.4 % of the EU energy tax revenue. Romania had the highest share among all EU countries at a significant 71.3 %, while Lithuania recorded the minimum share at 3.5 %.

## Energy taxes by economic activity, 2021

(% of energy tax revenue)



Source: Eurostat (online data code: env\_ac\_taxind2)

eurostat

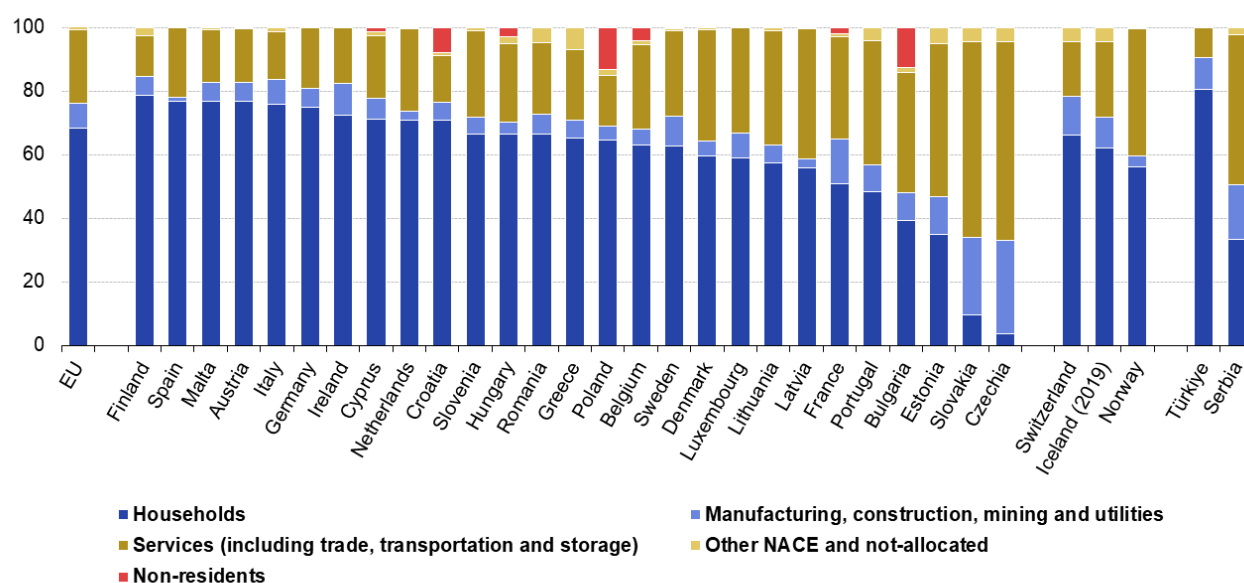
**Figure 12: Energy taxes by paying economic activities, 2021 (% in total energy tax revenue)** Source: Eurostat (env\_ac\_taxind2)

### Households pay over two-thirds of the EU transport taxes

On average, transport taxes paid by households accounted in 2021 for a larger share (68 %) of the EU transport taxes than those paid by corporations (31 %) (see Figure 13). This is because households are the main payers of the motor vehicle tax revenue (an important component of transport tax revenue) in the EU. However, in some Member States the structure of transport tax revenue by payer differs considerably, with households contributing only marginally to transport tax revenue, as in Czechia (4 %) and Slovakia (10 %).

## Transport taxes by economic activity, 2021

(% of transport tax revenue)



Source: Eurostat (online data code: env\_ac\_taxind2)

eurostat

**Figure 13: Transport taxes by paying economic activities, 2021 (% in total transport tax revenue) Source: Eurostat (env\_ac\_taxind2)**

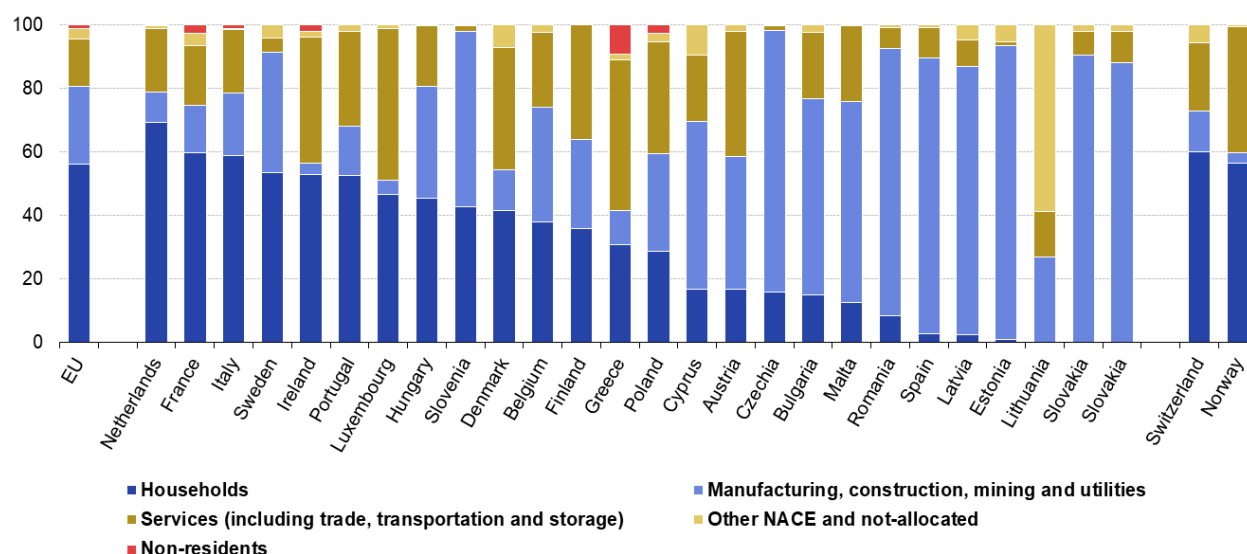
### Households pay slightly more than half of the EU taxes on pollution and resources

For the two combined tax categories, i.e. pollution and resource taxes, households pay a bit more than half of the tax revenue. This is because higher amounts are generated from taxes on household waste or sewage, wastewater, water abstraction, plastic bags, hunting and fishing taxes, etc. As already mentioned, pollution and resource taxes account for a very small share of the environmental tax revenue. In four countries, the taxes are levied on a small number of payers in some [NACE](#) industries and, as such, the data are subject to statistical confidentiality and related EU aggregates cannot be disclosed either. For this reason, for the EU, Estonia, Lithuania, Luxembourg and Norway, the presentation of the breakdown by payer has been adjusted (see Figure 14).

In the EU, on average, in 2021, 51.7 % of all revenue from pollution and resource taxes were levied on households. Large differences across EU Member States were, however, observed. In particular, in the Netherlands, households are the main payers of these taxes (69.2 %). In Germany, Croatia, Lithuania and Slovakia, no taxes existed in 2021, which would fit the definition of a pollution or resource tax. In Latvia, Spain and Estonia, these types of environmental taxes are collected, but only a negligible share is levied on households (less than 2 %). In Spain, corporations from the electricity, gas, steam and air conditioning supply sector pay about two-thirds of all pollution and resource taxes. In Romania and Cyprus, mining and quarrying activities contribute to about 40 % of all pollution and resource taxes.

## Pollution and resource taxes by economic activity, 2021

(% of pollution and resource tax revenue)



Source: Eurostat (online data code: env\_ac\_taxind2)

eurostat

**Figure 14: Pollution and resource taxes by paying economic activities, 2021 (% in total pollution and resource tax revenue)** Source: Eurostat (env\_ac\_taxind2)

## Source data for tables and graphs

- [Environmental tax statistics — figures and tables](#)

## Data sources

**Legal basis and methodology** Statistics on environmental taxes by economic activity are compiled and reported under Regulation 691/2011 of 6 July 2011 on European environmental economic accounts (Annex II), amended by the Commission Delegated Regulation (EU) 2022/125 of 19 November 2021, as well as on legal acts in the area of national accounts. Data transmission became obligatory in September 2013. Prior to this, Eurostat collected the data on a voluntary basis.

Eurostat uses table 9 from the ESA transmission programme to supplement its compilation of data on environmental tax revenue for four categories of environmental taxes (energy, transport, pollution and resources). A Eurostat publication titled 'Environmental taxes - a statistical guide' constitutes the methodological basis.

## Detailed breakdown and sources

Environmental tax revenue is allocated according to the different economic activities that pay the taxes. Eurostat collects data on environmental taxes using a breakdown by economic activity (NACE Rev. 2 classification) supplemented by information for households, non-residents and a category not allocated.

The main sources for the allocation of taxes by economic activity are: National Accounts (mainly supply and use tables), or data on energy use, waste disposal data, etc. A third option can be direct allocation based on micro data from the fiscal administrations about tax payers for each environmental tax separately.

Data on environmental taxes can be used to analyse the revenue stream from such taxes, as well as to provide a relative measure of the importance of these taxes by calculating ratios relative to GDP or to the total revenue from all taxes and social contributions. In the first case, the comparison helps to provide an understanding of the tax burden. In the second case, the comparison helps assess whether or not there is a shift towards environmental taxes - in other words, shifting the tax burden from other taxes (for example those on labour income) towards



environmental taxes.

Rising revenue from environmental taxes should be interpreted with caution. The increases may be caused by new taxes or an increase in tax rates, or may also be linked to an increase in the tax base.

## Context

Economic instruments for pollution control and natural resource management are an increasingly important part of environmental policy in EU countries. These include, among others, environmental taxes, fees and charges, tradable permits, deposit-refund systems and subsidies.

Environmental taxes have been increasingly used to influence the behaviour of economic operators, whether producers or consumers. The EU has increasingly favoured these instruments because they provide a flexible and cost-effective means for strengthening the 'polluter-pays' principle and for achieving environmental policy objectives.

Under the subject of 'Greening national budgets and sending the right price signals', the European Green Deal acknowledges that well-designed tax reforms can boost economic growth and resilience to climate shocks and help contribute to a fairer society and to a just transition. They play a direct role by sending the right price signals and providing the right incentives for sustainable behaviour by producers, users and consumers. At national level, the European Green Deal will create the context for broad-based tax reforms, removing subsidies for fossil fuels, shifting the tax burden from labour to pollution and taking into account social considerations.

Environmental policy aims to achieve environmental and sustainable development goals. Policy makers use incentive-based tools to ensure that environmental solutions are found at the lowest cost, to correct externalities and/or raise revenue for specific purposes. The environmental tax revenue measured as share of all taxes and social contributions is an indicator to help assess progress towards 'greening' the taxation system.

## Other articles

- [Environmental tax statistics](#)

## Tables

- [Environment \(t\\_env\)](#)
- [Environmental taxes \(t\\_env\\_eta\)](#) , see:

Environmental tax revenues (t2020\_rt320)

Energy taxes (t2020\_rt300)

Energy taxes by paying sector (t2020\_rt310)

Implicit tax rate on energy (ten00120)

## Database

- [Environment \(env\)](#)
- [Environmental taxes \(env\\_eta\)](#) , see:

Environmental tax revenues (env\_ac\_tax)

Energy taxes by paying sector (env\_ac\_taxener)

Environmental taxes by economic activity (NACE Rev. 2) (env\_ac\_taxind2)

## Dedicated section

- [Environment](#)
- [Environmental taxes and subsidies](#)

## Publications

- [Tax revenue statistics](#)
- [Energy, transport and environment statistics](#) - Eurostat Statistical books, 2019
- [Key figures on Europe - 2019 edition](#) - Eurostat Statistical books, 2019

## Methodology

- [Environmental taxes - a statistical guide - 2013 edition](#) - Eurostat Statistical books, 2013
- [Environmental taxes by economic activity \(NACE Rev. 2\)](#) (env\_ac\_taxind2)
- [Environmental tax revenue](#) (ESMS metadata file — env\_ac\_tax\_esms)
- [Implicit tax rate on energy \(ITR\)](#) (ESMS metadata file — ten00120\_esmsip)

## Legislation

- [Regulation \(EU\) No 691/2011 of 6 July 2011 on European environmental economic accounts](#)
- [Summaries of EU legislation: European environmental economic accounts](#)

## External links

European Commission

- [Environment - Policies](#)
  - [Mobility and Transport - Keeping Europe moving](#)

Taxation and Customs Unit

- [Taxation and Customs Union, Taxes in Europe database](#)

Organisation for Economic Co-Operation and Development (OECD)

- [OECD database on policy instruments for the environment](#)
  - [OECD Effective Carbon Rates - Pricing CO<sub>2</sub> through Taxes and Emissions Trading Systems](#)

European Environment Agency (EEA)

- [Environmental taxation and EU environmental policies](#)