Environmental tax statistics

Statistics Explained

Data extracted in July 2025
Planned article update: July 2026

Highlights

In 2023, total environmental tax revenue in the EU amounted to € 341.5 billion, representing 2% of EU GDP and 5.1% of total EU government revenue from taxes and social contributions (TSC).

Taxes on energy in the EU accounted for more than three-quarters of the total revenues from environmental taxes (76% of the total) in 2023, well ahead of taxes on transport (19%) and pollution and resources (5%).

This article provides an updated overview of environmental tax data in the European Union, incorporating the latest figures up to 2023. According to Regulation (EU) N° 691/2011 on European environmental economic accounts , 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. The article highlights recent trends in environmental tax revenue statistics and identifies the main contributors to these changes. It also serves as a complement to the existing Eurostat publication on environmentally related taxes ' Environmental Taxes – A Statistical Guide, 2024 edition '.

Environmental taxes in the EU

In today's economy, production and consumption decisions have a significant impact on the environment. Environmental policies, in particular fiscal policies through taxes, seek to balance economic growth with ecological sustainability. These environmentally related taxes are based on the 'polluter-pays' principle, encouraging more sustainable behaviour while generating revenue to address environmental damage. Environmental taxes are an important policy instrument in the EU's strategic agenda, aimed at strengthening its competitiveness and ensuring the success of the climate neutrality objective.

In 2023, the governments in the EU collected environmental tax revenue of € 341.5 billion. The value represented 2.0% of the EU gross domestic product (GDP) and 5.1% of the EU total government revenue from taxes and social contributions (TSC)[1] (see Table 1).

The € 341.5 billion recorded for the EU represents a 2.1% increase compared with 2022, following a 8.1% decline from 2021 to 2022. Over the last three-year period, the share of environmental taxes in total tax revenues fell by 1.0 percentage point (pp) overall. (see Figure 1 below). While in 2021 environmental taxes accounted for 6.1% of total tax and social contribution revenues in the EU, this percentage dropped to 5.2% in 2022, marking a decrease of 0.9 pp from the previous year. The decline continued slightly in 2023, with environmental taxes representing 5.1% of total revenues, a further decrease of 0.1 pp from 2022. This indicates that environmental taxes have become a smaller portion of the overall tax and social contribution revenue in the EU.

[1] Excluding imputed social contributions.

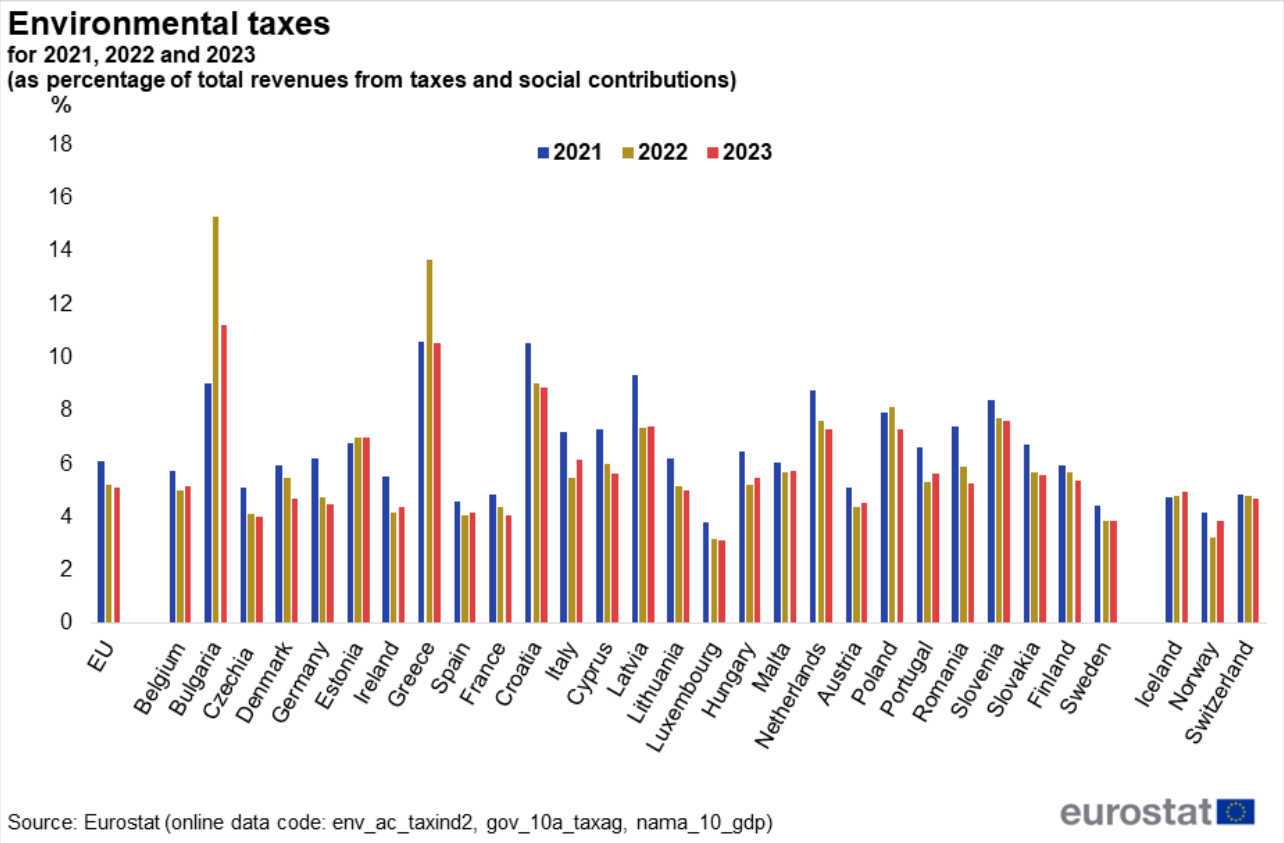
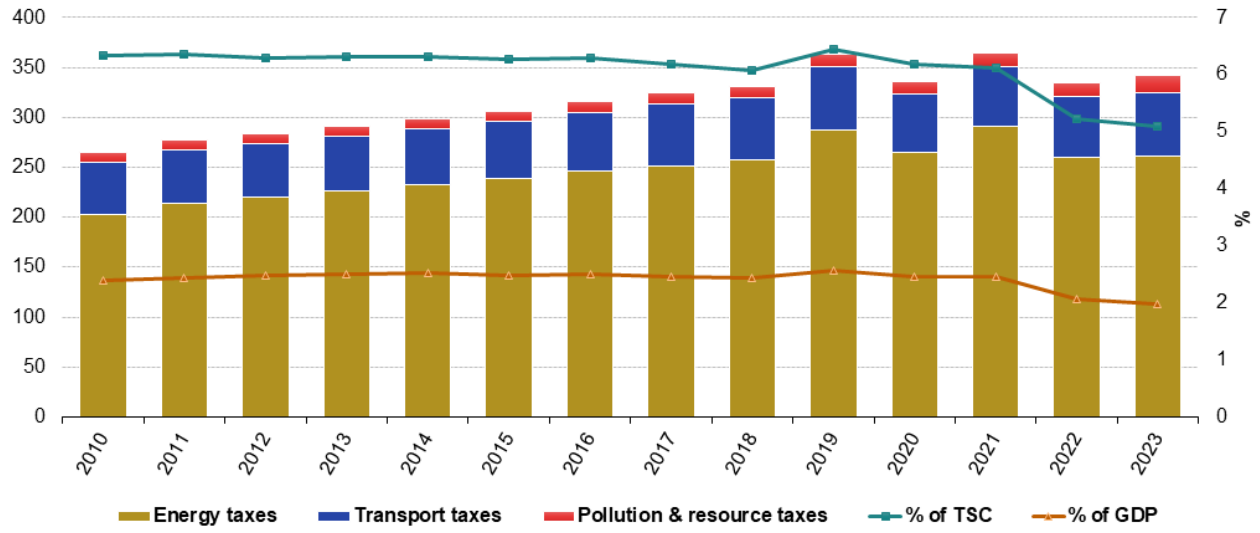


Figure 1: Environmental taxes, as percentage of total taxes and social contributions 2021, 2022 and 2023
Source: Eurostat (env_ac_taxind2), (gov_10a_taxag), (nama_10_gdp)

Despite the nominal increase in environmental tax revenue, the share of environmental taxes in GDP has declined from 2.4% in 2010 to 2% in 2023. Within the 2010–2023 time series (see figure 2) the 2% recorded in 2023 represents the lowest share and confirms that environmental tax revenue has been growing more slowly than GDP in recent years. The period from 2020 to 2023 shows the most volatility, reflecting both economic disruptions and shifts in energy prices and consumption patterns.

Environmental tax revenue by type (¹) and total environmental taxes as share of TSC and GDP (²), EU 2010-2023
(€ billion and % TSC and % GDP)



(¹) left axis.
(²) right axis.
The shares of GDP and TSC are calculated using the national tax lists from Oct 2024.
Source: Eurostat (online data codes: env_ac_taxind2, nama_10_gdp, gov_10a_taxag)

eurostat

Figure 2: Environmental tax revenue by type and total environmental taxes as share of TSC (total government revenue from taxes and social contributions) and GDP, EU 2010-2023 Source: Eurostat (env_ac_taxind2)

Environmental tax revenue varied across EU countries, but energy taxes remained the main source in most of the countries

Figure 3 shows the 2023 environmental tax revenue by country both as a percentage of GDP and of TSC, presenting for the latter also the split by type of tax.

The breakdown of the environmental tax revenue by category is also available for 3 EFTA countries. For details, see Figure 3.

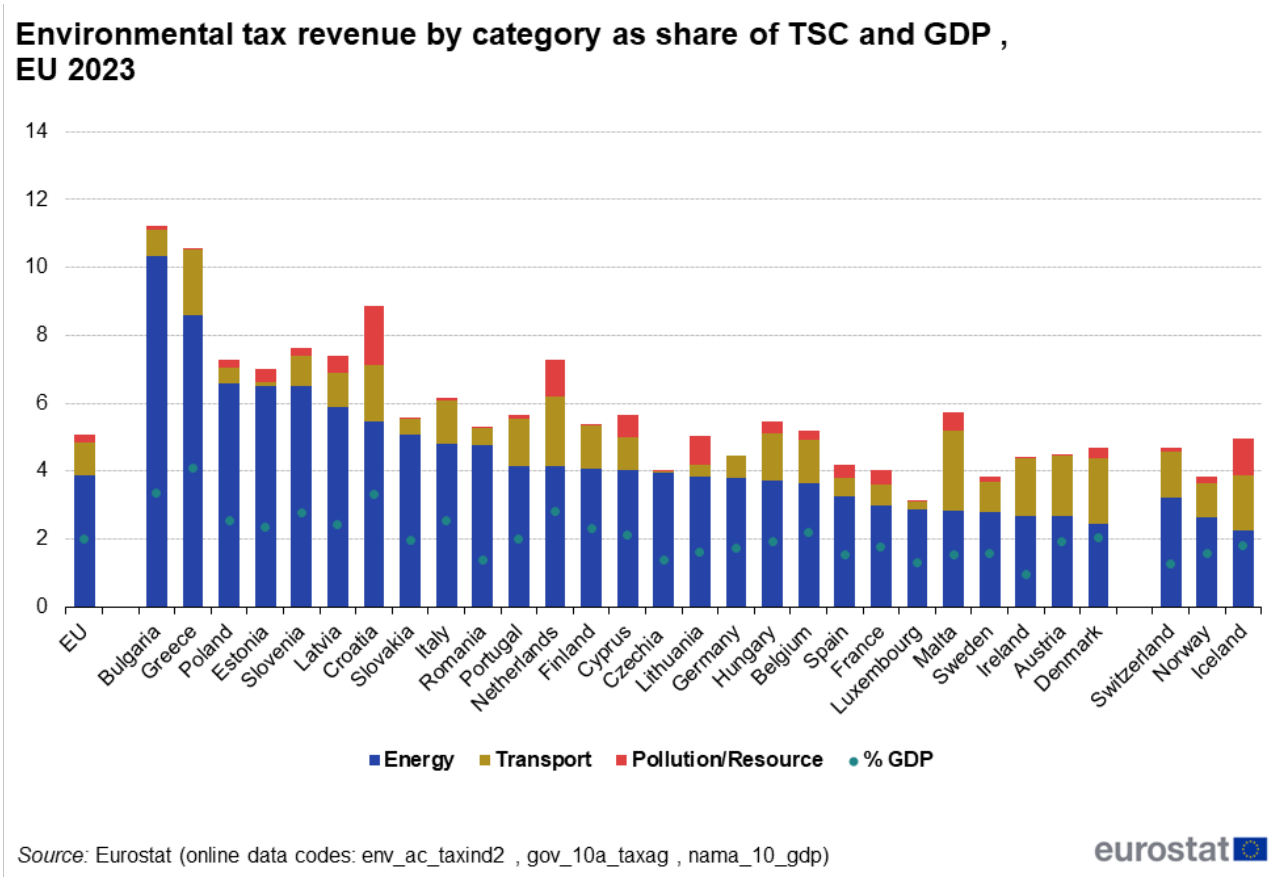


Figure 3: Environmental tax revenue by category as % of TSC and GDP, 2023 Source: Eurostat (env_ac_taxind2)

To succeed in the EU's climate neutrality objective by 2050, taxation systems are a key policy tool. Well-designed tax reforms can stimulate eco-
nomic growth, reduce greenhouse gas emissions through effective carbon pricing, and support a equitable transition.

Shifting the tax burden from 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. Figure 4 shows the development related to Environmental taxes and labour taxes.

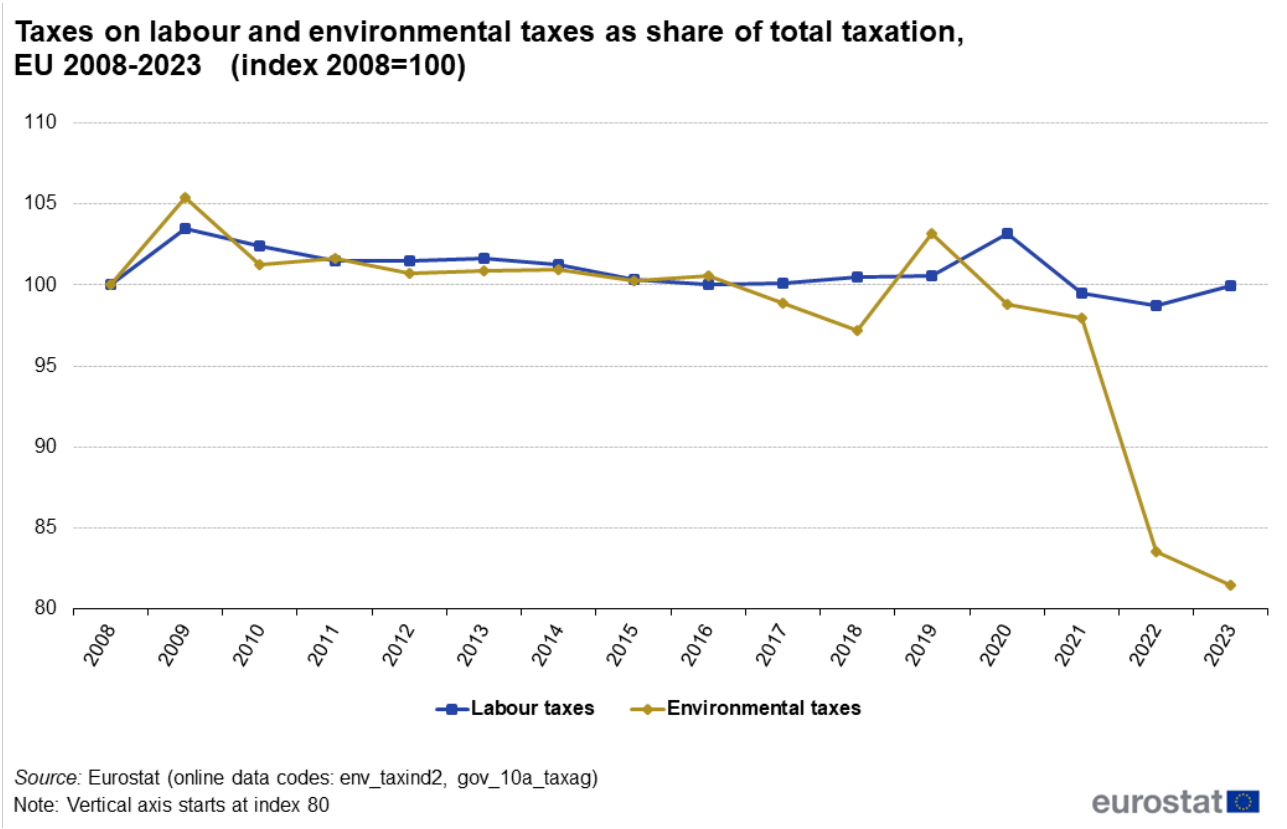


Figure 4: Taxes on labour and environmental taxes as share of total taxation (index 2008=100) Source: Eurostat (env_ac_taxind2), DG TAXUD

Between 2008 and 2023, labour tax revenues in the EU remained relatively stable, fluctuating narrowly around the base index value of 100, with minor variations between 98.8 and 103.5 until 2019 (except for the peak to 105.4 in 2009 for the environmental taxes).From 2020 onwards, environmental tax revenues experienced a marked decline, dropping sharply to an index value of 81.4 in 2023. This represents an 18.6% decrease compared to 2008 levels, highlighting a significant reduction in environmental tax revenues relative to the base year.

Environmental tax categories

Environmental tax revenue is divided into four main categories: energy taxes, transport taxes, pollution taxes, and resource taxes. Given the relatively small share of pollution and resource taxes in total environmental tax revenue, along with difficulties in classifying some minor national taxes, this article combines these 2 categories when presenting the breakdown of environmental taxes.

In 2023, total environmental tax revenue across the EU amounted to approximately € 341.5 billion, with energy taxes constituting the largest share at € 261.1 billion, followed by transport taxes at € 64 billion, and pollution and resource taxes combined accounting for € 16.4 billion. In 2023, energy taxes accounted for more than 76.4% of the EU's environmental tax revenue, totalling approximately € 261.1 billion. This category encompasses levies on energy products such as coal, oil products, natural gas, and electricity used for both stationery and transport purposes. By convention, CO_2 taxes are also included within this group. Transport taxes primarily consist of levies related to motor vehicle ownership and usage. In 2023, transport taxes contributed approximately for € 64 billion, representing around 18.7% of the EU's total environmental tax revenue. Pollution and resource taxes include various types of taxes on raw material extraction, emissions to water and air, noise, and waste management. In 2023, these taxes generated approximately € 16.4 billion, accounting for about 4.8% of the EU's total environmental tax revenue.

Total environmental tax revenue by type of tax and tax payer, EU 2023

2023	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)		
					Corporations	Households	Non-residents
Total environmental taxes	341,524	100.0	2.0	5.1	49.4	48.3	2.3
Energy taxes	261,089	76.4	1.5	3.9	53.3	44.0	2.7
Transport taxes	64,030	18.7	0.4	1.0	32.5	66.5	0.9
Taxes on Pollution/Resources	16,406	4.8	0.1	0.2	53.5	45.4	1.1

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

Source: Eurostat (online data codes: env_ac_taxind2 , gov_10a_taxag , nama_10_gdp)

eurostat

Table 1: Total environmental tax revenue by type of tax and tax payer, EU 2023 Source: Eurostat (env_ac_taxind2)

Among individual countries, Germany reported the highest national total environmental tax revenue at nearly € 73 billion, predominantly driven by energy taxes (€ 61.9 billion) and transport taxes (€ 11 billion). Other significant contributors to the EU total included Italy (€ 54.4 billion), France (€ 50 billion), and the Netherlands (€ 30 billion). While larger economies primarily dominate the total environmental tax revenues, smaller EU countries such as Belgium, Spain, and Poland also demonstrate notable environmental tax collections across the various categories.

Environmental tax revenue by payer

Total environmental tax revenues are almost evenly split between households and the corporations sector. The pie chart below shows the distribution of environmental tax revenues in the European Union (EU) for the year 2023, categorized by payer type: Households, Non-Residents, and Corporations (classified under NACE, which is the classification used for economic activities). Environmental taxes paid by households accounted for 48.3% of total environmental tax revenues, while corporations contributed for 49.4% to total environmental taxes. Corporations active in manufacturing activities (NACE C) contributed the most by 10.8% to total environmental taxes; corporations in the transport and storage activities (NACE H) contributed for 10.3%. Non-residents paid 2.3% of total environmental taxes.

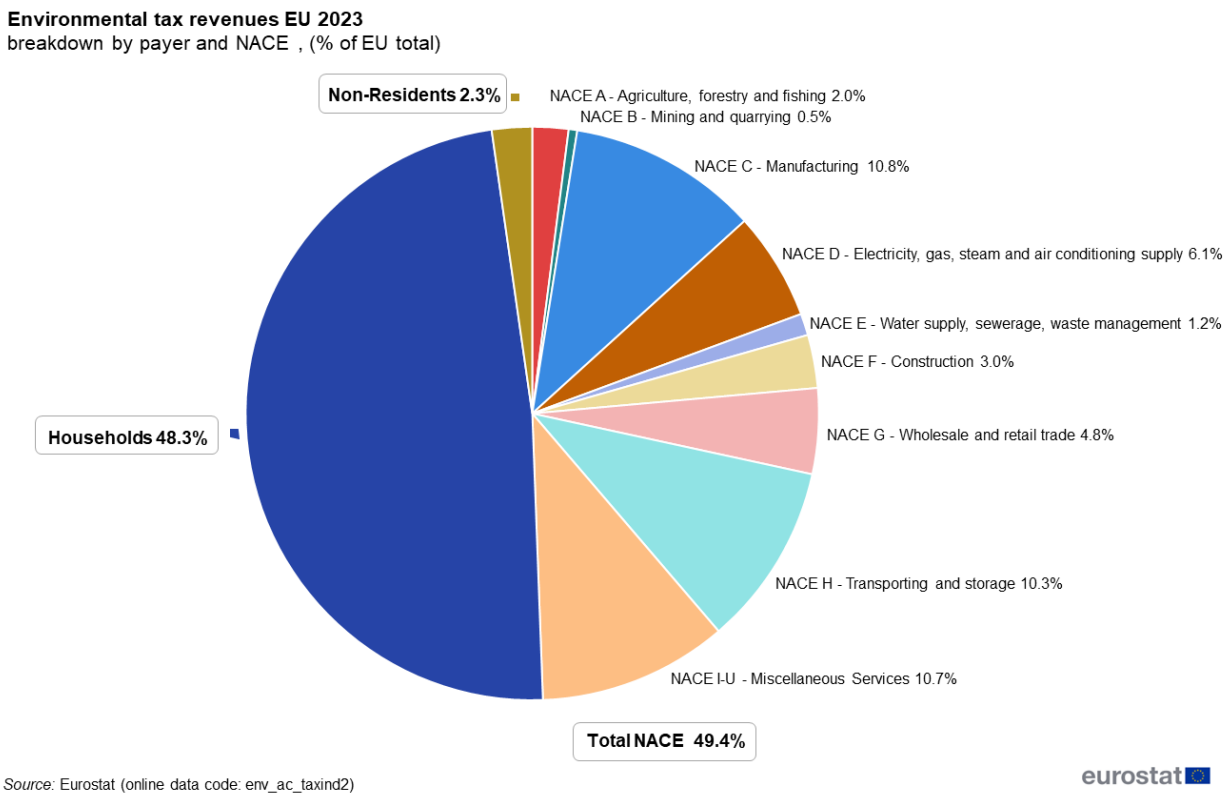


Figure 5: Environmental tax revenues EU 2023, breakdown by payer and NACE Source: Eurostat (env_ac_taxind2), DG TAXUD

Although in 2023 environmental tax revenues in the EU were nearly evenly split between households and corporations, national patterns vary significantly (see Figure below). Some countries like Ireland, Netherlands, Slovenia and France rely heavily on household contributions (over 55%), while Romania, Estonia, Czechia and Bulgaria show a strong industrial tax contribution. Luxembourg stands out with nearly half (48.7%) of its environmental tax revenue coming from non-residents, likely due to cross-border fuel sales. In contrast, countries such as Germany and Portugal display a more balanced distribution across payer groups. These variations reflect national economic structures, energy use, and policy choices affecting environmental taxation.

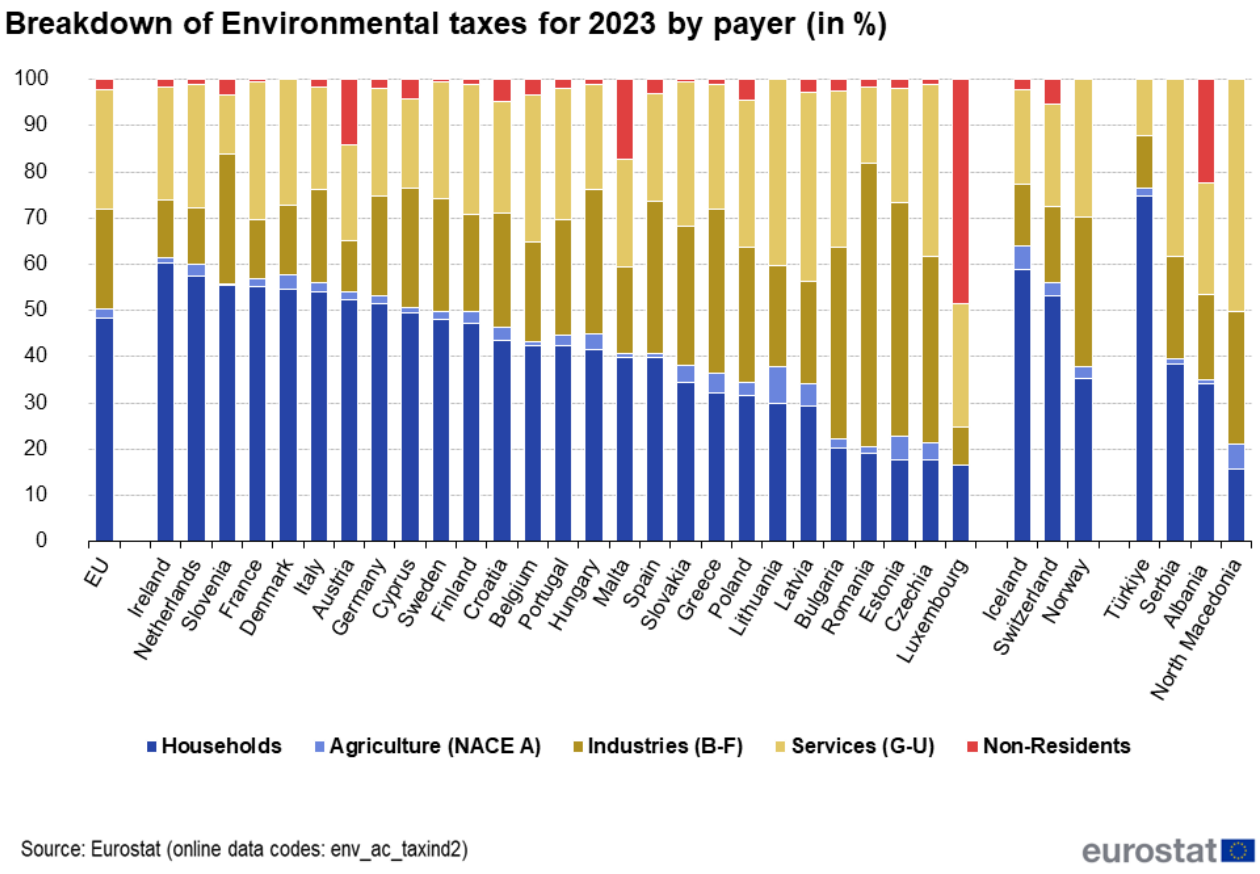


Figure 6: Environmental taxes by economic activity, 2023 (% in total environemntal tax revenue) Source: Eurostat (env_ac_taxind2)

Energy Taxes

Energy taxes: corporations surpass households as primary contributors Energy taxes are the primary source of environmental tax revenues in the EU - a trend that continued in 2023, for all different payer groups. Households contributed, on average across the EU, with 44.0% of the energy taxes, underlining their key role in final energy consumption.

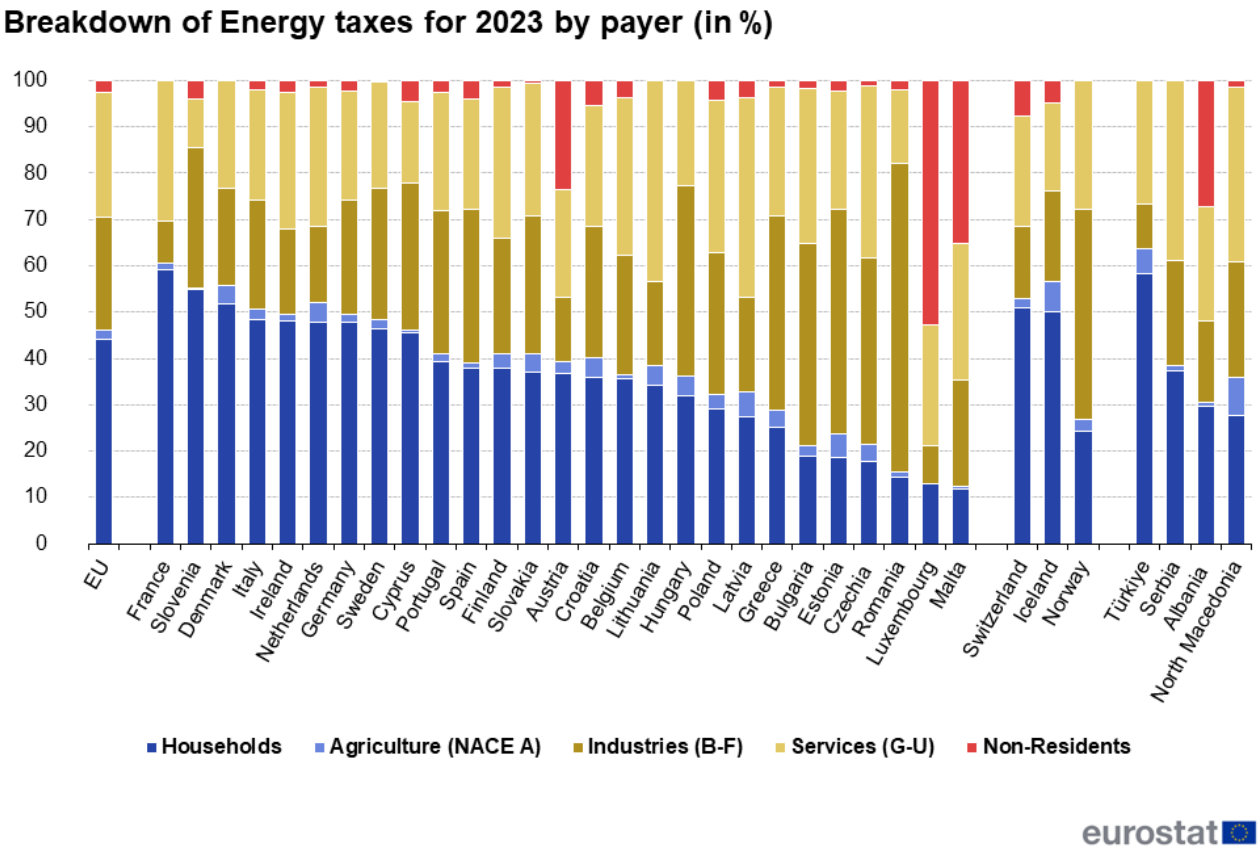


Figure 7: Energy by paying economic activities, 2023 (% in total energy tax revenue) Source: Eurostat (env_ac_taxind2)

Emission permits

EU countries generate substantial revenue through emission permits, which allow holders to release a specific amount of greenhouse gases into the atmosphere. Under the European Emissions Trading System (ETS), these permits are classified as taxes according to ESA 2010, the standard used for compiling macroeconomic statistics, including National Accounts. Governments are increasingly using cap-and-trade schemes like the EU ETS to regulate CO2 emissions.

Launched in 2005, the EU ETS initially allocated emission allowances for free. Since 2013, however, auctioning has become the primary method for distributing these permits. In the third phase of the ETS (2013–2020), over 70% of allowances were auctioned, and this figure has continued to rise, with phase 4 (2021–2030) introducing a gradual reduction in the total number of emission permits. This phase focuses on protecting sectors at risk of relocating production outside the EU by providing 100% free permits, while free allocations for less exposed sectors will be phased out after 2026. Revenue from ETS auctions is recorded as "other taxes on production" (D.29) under ESA 2010. This means the revenue is recognised in the year the permits are used for emissions, rather than when they are auctioned.

In 2023, EU countries reported a record of € 29.1 billion in revenue from ETS allowances. From 2013 to 2023, the EU experienced a significant increase in revenues from ETS certificates, rising up to nearly € 29.1 billion. This marked growth, particularly after 2017, reflects strengthening carbon pricing and expanding market participation. Germany consistently remained the largest contributor, though its revenues slightly declined in 2023 after peaking in 2022. Italy and Spain also showed steady increases, with revenues exceeding € 3 billion and € 3.1 billion respectively by 2023. Smaller member states such as Bulgaria and Greece saw notable rises in ETS revenues, indicating wider adoption and market integration. Overall, the data highlight the growing importance of the EU ETS as a key instrument for carbon pricing. Rising EU ETS revenues underline increased emissions trading activity and higher carbon costs across member states.

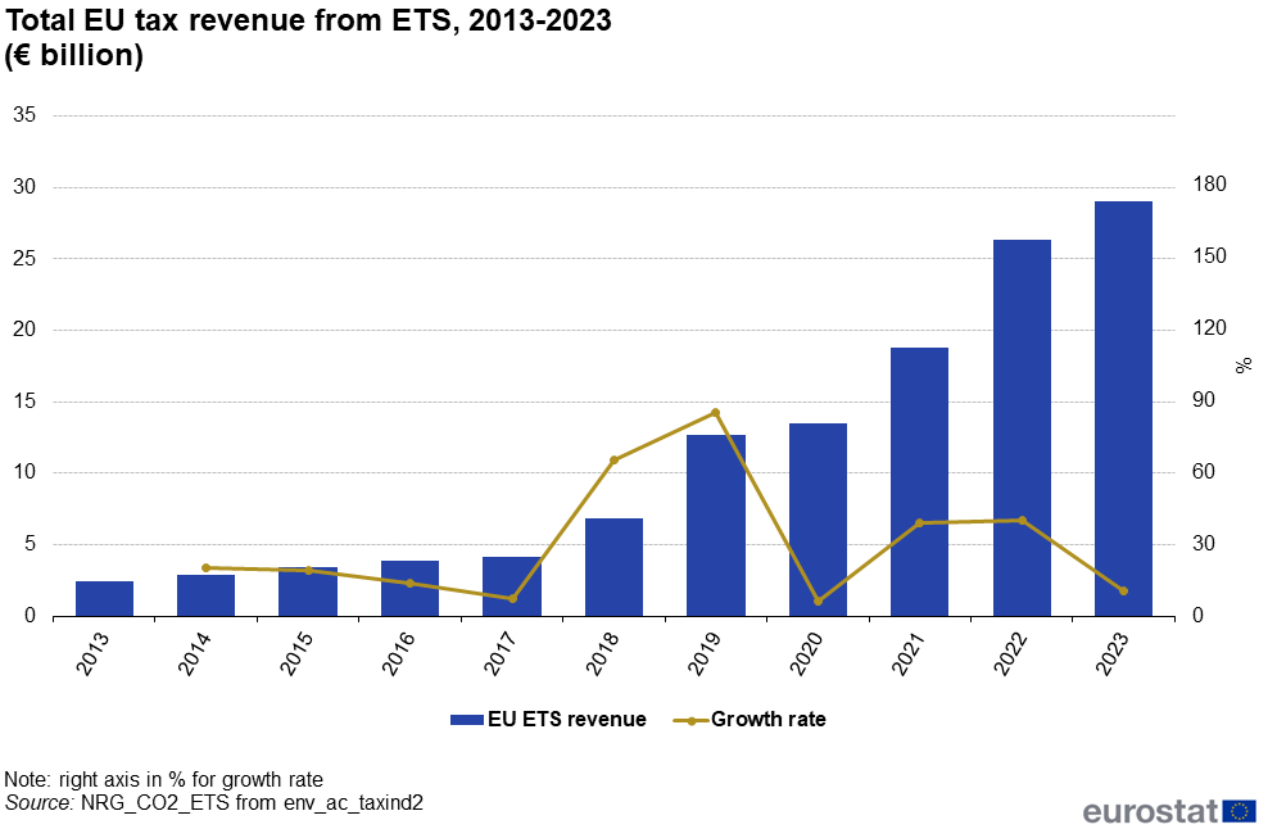


Figure 8: Total EU tax revenue from ETS, 2013-2023 Source: Eurostat (env_ac_taxind2)

EU countries must direct at least 50% of ETS revenue towards tackling climate change. Additionally, the EU uses a portion of this revenue to support innovation and fund the energy transition across Member States.

Transport taxes

Transport taxes: households shoulder the majority of the burden

In 2023, households were by far the main contributors to transport tax revenues in the EU, accounting for 66.5% on average. This reflects the strong link between transport taxes and private vehicle ownership and use. Transport taxes include in particular vehicle registration taxes and other related taxes. The services sector followed with 23.4%, while industry (8.1%), agriculture (1.1%), and non-residents (0.9%) made up smaller shares. National patterns vary widely: Ireland (80.0%), Malta (78.8%), and Austria (76.3%) show particularly high household shares, indicating a tax structure focused on private vehicle users. In contrast, Slovakia (8.5%) and Czechia (13.5%) report much lower household shares, with the bulk of transport taxes paid by businesses, especially in the services sector, which contributes over 60% in both countries. These differences reflect national transport habits, tax policies, and vehicle ownership trends across Europe.

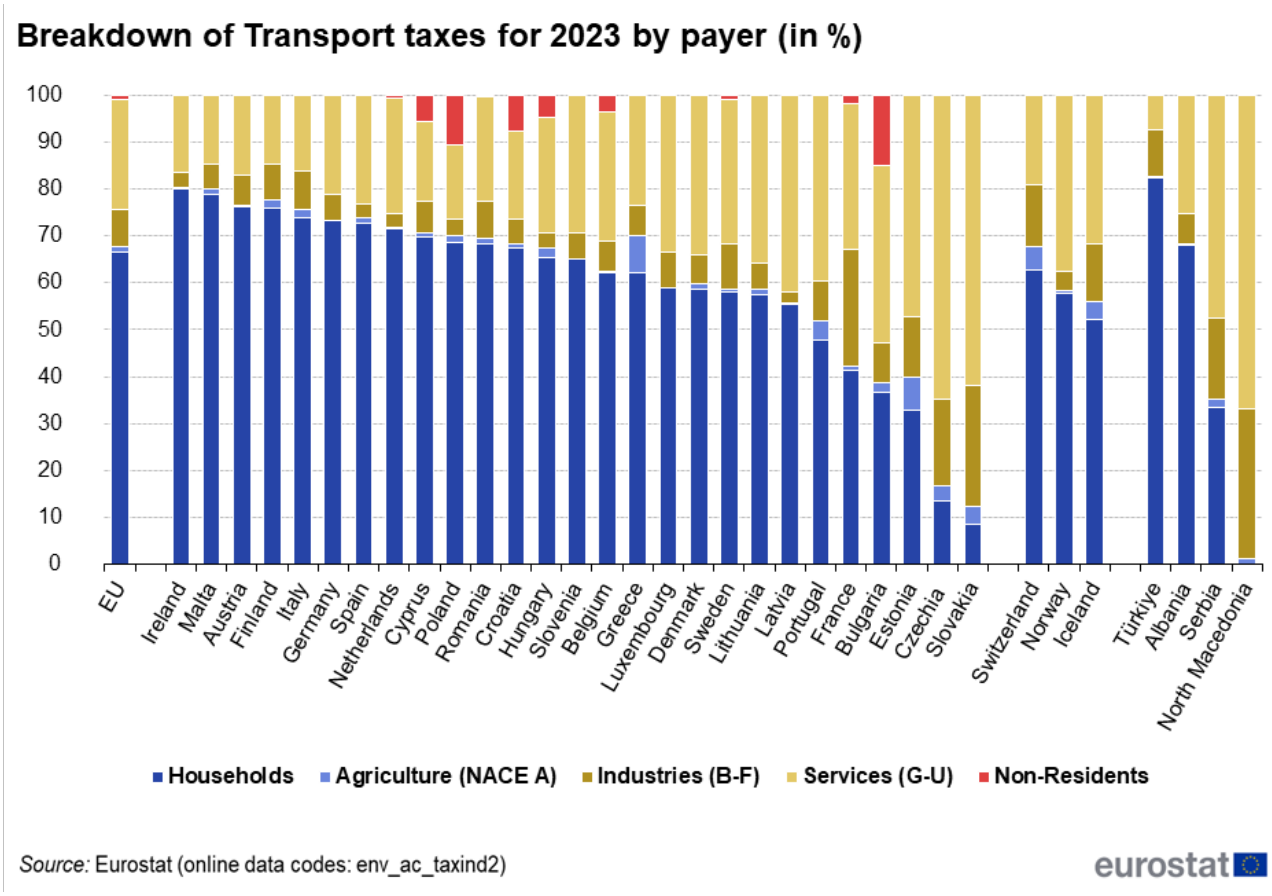


Figure 9: Transport taxes by paying economic activities, 2023 (% in total transport tax revenue) Source: Eurostat (env_ac_taxind2)

Pollution and resource taxes

Pollution and resource taxes: data indicates a diverse approach across the EU

For 2023, pollution and resource taxes remain the smallest category with a consistent upward trend. Starting at about 10 billion Euro in 2008, they had increased to nearly 16.4 billion by 2023. This reflects a growing recognition of the need to address broader environmental issues, not just energy and transportation, but the more extensive impact of resource use and pollution.

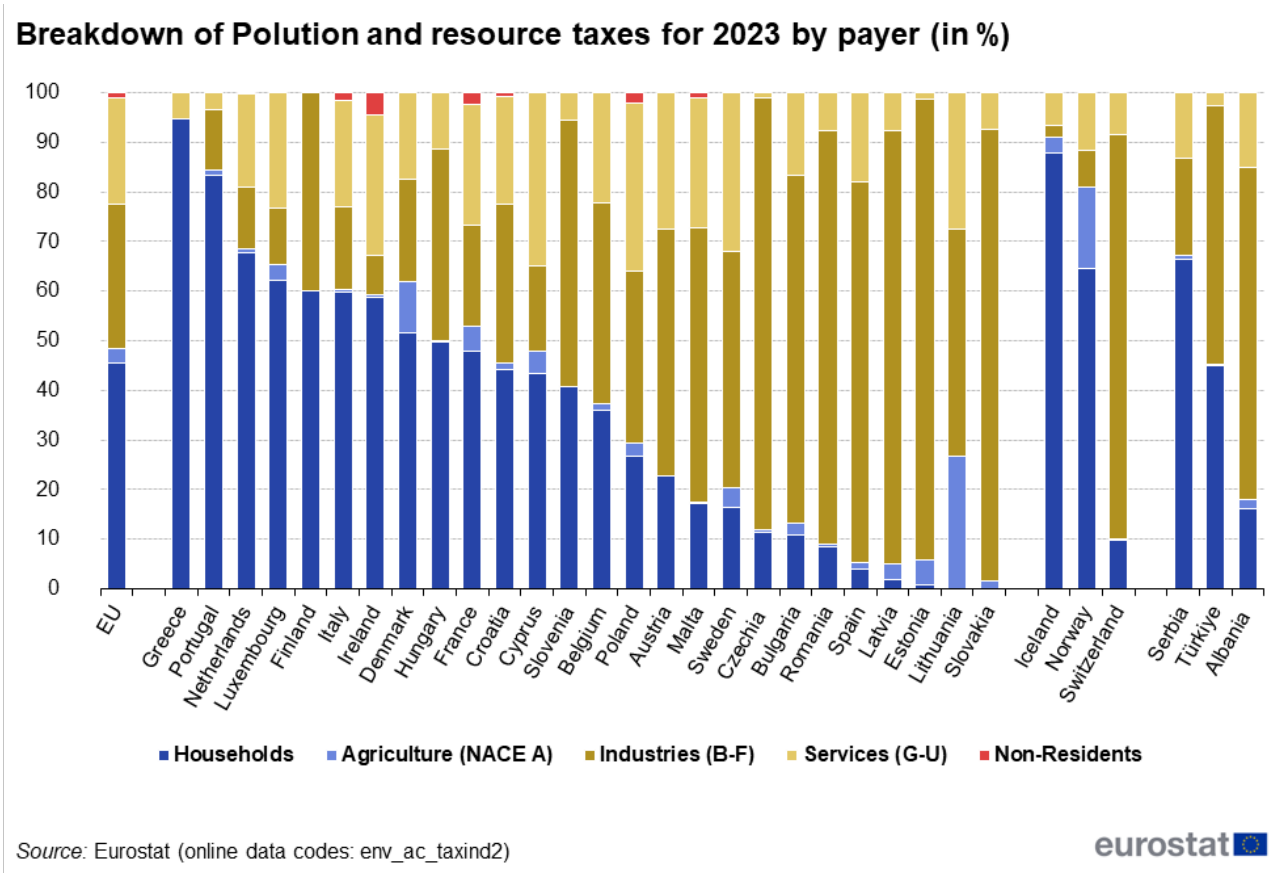


Figure 10: Pollution and resource taxes by paying economic activities, 2023 (% in total pollution and resource tax revenue) Source: Eurostat (env_ac_taxind2)

In 2023, pollution and resource tax revenues in the EU were mainly paid by households (45.4%), followed by industries (29.1%) and the services sector (21.4%). The share from agriculture remained relatively small, averaging 3.0%, while non-residents contributed just over 1%. The distribution of these taxes reflects the varying ways countries apply environmental taxes and levies, with some focusing more on household-level waste and pollution charges, and others on industrial emissions or resource use. Overall, the data indicates a diverse approach across the EU to taxing environmental impacts beyond energy and transport.

Conclusion

Environmental taxes should not be interpreted independently of other environmental accounts—they are embedded within the broader framework of monetary environmental accounts and closely linked to related statistical areas such as Environmental Protection Expenditure Accounts (EPEA), Environmental Subsidies and Similar Transfers (ESST), and potentially environmentally damaging subsidies (PEDS). At the same time, analysing environmental tax revenues alongside other datasets—such as air emission accounts or energy balances—provides valuable insights into the interactions between economic instruments and environmental pressures. This integrated perspective supports more comprehensiveand effective policy analysis and decision-making.

Source data for tables and graphs

- Environmental tax statistics — figures and tables

Data sources

Eurostat collects data on environmental taxes at a detailed level, by economic activity, under Regulation (EU) N° 691/2011 on European environmental economic accounts. The Eurostat publication titled ' Environmental taxes — a statistical guide ' constitutes the methodological basis for this data collection.

In addition, using 'National Tax Lists', a supporting dataset to Table 9 from the ESA transmission programme, Eurostat gathers data on environmental taxes for 3 categories - energy, transport, pollution/resource taxes; the data are then validated and published.

Data relating to environmental taxes can be used to analyse the revenue stream from such taxes and to provide a relative measure of the importance of these taxes through the calculation of ratios relative to GDP or to the total revenue from all taxes and social contributions. In the first case (ratio relative to GDP), the comparison helps to provide an understanding of the tax burden. In the second case, the comparison helps to assess whether or not the tax burden is shifting from other tax bases (for example, labour income) towards environmental taxes. It has to be noted that the total revenue of taxes and social contributions used to compute the ratio does not include imputed social contributions. For further information concerning various tax aggregates, see 'Main national accounts tax aggregates' .

Environmental tax revenue can also be allocated according to the different economic activities paying the taxes. Eurostat collects data on environmental taxes using a categorisation by economic activity (based on the NACE Rev. 2 classification supplemented by information for households, non-residents and a residual category for taxes that could not be allocated).

Increasing revenue from environmental taxes should be interpreted with caution. The increases may be caused by the introduction of new taxes or an increase in tax rates, or alternatively may be linked to an increase in the tax base caused, for instance, by a higher consumption of energy products.

Context

Economic instruments for pollution control and natural resource management are an important part of environmental policy in the EU Member States. The range of instruments that are available includes, among others, environmental taxes, fees and charges, tradeable permits, deposit-refund systems and subsidies.

The European Green Deal creates the context for well-designed tax reforms which boost economic growth and resilience to climate shocks and help contribute to a fairer society and to a just transition. Environmental taxes play a direct role by sending the right price signals and providing the right incentives for sustainable behaviour by producers, users and consumers.

The use of economic tools for the benefit of the environment is also promoted in Goal 17 of the EU sustainable development goals .

This article is available on-line at
http://ec.europa.eu/eurostat/statistics-explained/index.php/Environmental_tax_statistics

Footnotes

Explore further

Other articles

- Tax revenue statistics

Database

- Environment (env)
- Environmental taxes (env_eta) , see:

Environmental tax revenues (env_ac_tax)

Environmental taxes by economic activity (NACE Rev. 2) (env_ac_taxind2)

Main national accounts tax aggregates (gov_10a_taxag)

Thematic section

- Environment
- Environmental taxes and subsidies

Publications

- Key figures on Europe — Statistics Illustrated - 2023 edition — Statistical book, 2023
- Taxation trends in the European Union - Data for the EU Member States, Iceland and Norway, 2020

Selected datasets

- Environment (t_env)
- Environmental taxes (t_env_eta) , see:

Environmental tax revenues (ten00141)

Energy taxes (ten00139)

Implicit tax rate on energy (ten00120)

Methodology

- Environmental tax revenues (ESMS metadata file — env_ac_tax_esms)
- Environmental taxes by economic activity (NACE Rev. 2) (ESMS metadata file — env_ac_taxind2_esms)
- Implicit tax rate on energy (ITR) (ESMS metadata file — ten00120_esmsip)

External links

- European Commission — Environment — Policies
- European Commission — Energy Strategy
- European Commission — Taxation and Customs Union
- European Commission - Taxes in Europe database

Legislation

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