Environmentally related tax revenue

April 2024

Dataset documentation

Environmentally related taxes are effective policy instruments to shape relative prices of goods and services. The Environmental Related Tax Revenue Database (ERTR) categorises taxes based on their environmental relevance, constructing environmentally related tax revenue with a breakdown by tax-base category (including energy, transport, pollution, and resources) and 22 environmental domains. Note that tax-base categories are mutually exclusive, while domains are not. Therefore, one should not aggregate revenue across domains as it may lead to double counting.

The dataset is released biannually, in the Spring and Autumn. The specific dates may vary due to differing reporting timelines across countries and the individual release schedules of data sources used in cross-validation procedures.

ERTR draws from the OECD *Policy Instruments for the Environment (PINE)* database. The PINE database contains detailed qualitative and quantitative information on environmentally related taxes and fees, tradable permits and offsets, deposit-refund schemes, environmentally beneficial subsidies and payments and voluntary approaches used for environmental policy. The dataset covers OECD member countries, accession countries and selected non-OECD countries[1] since the year 1994, and it has been cross-validated and complemented with *Revenue statistics* from the *Global Revenue Statistics databases*, Eurostat National Tax Lists, and official national sources.

The data need to be interpreted with caution as environmentally related tax revenue can increase or decrease due to multiple factors. For example, declines may be caused by erosion of the base (beneficial from an environmental perspective) or lowered tax rates (usually harmful from an environmental perspective).

For further details on the PINE database, please see oe.cd/pine. For revenue data at the individual-tax level, please consult https://oe.cd/pinedatabase.

Contact: pinedatabase@oecd.org

[1] Environmentally related tax revenues for non-OECD countries should be considered as lower-end estimates. This is because the *Revenue Statistics datasets*, in some cases, do not have the necessary level of detail to identify the revenue from taxes related to the environment and instead these taxes could be included as a part of a broader classification.

Category

Data on environmentally related tax revenue are presented for four mutually exclusive tax-base categories and the total:

Energy	Energy products (e.g. fossil fuels and electricity) including those used in transportation (e.g. petrol and diesel). This includes all CO_2-related taxes.
Transport	One-off import or sales taxes on transport equipment, recurrent taxes on ownership, registration or use of motor vehicles, and other transport-related taxes. (Note that this definition excludes excise taxes on automotive fuels.)
Pollution	SOx and NOx emission taxes, taxes on ozone-depleting substances such as chlorofluorocarbons (CFCs), carbon tetrachloride and chlorofluoromethanes (HCFCs), taxes on discharge of wastewater, taxes on packaging (e.g. plastic bags), on final disposal of solid waste and other waste-related taxes (e.g. batteries, tyres).[2]
Resources	Taxes on water extraction, forest products, hunting and fishing taxes, mining royalties, excavation taxes (e.g. sand and gravel). Note that fees and charges related to water supply are not included.
All tax-bases	The sum of the four tax-base categories.

The OECD has developed practical methodological guidelines for compiling environmentally related tax revenue accounts in line with the System of Environmental-Economic Accounting (SEEA)[3]. Table 1 of these guidelines provides a detailed list of tax-bases included in each of the categories presented above.[4]

The data presented in this dataset include revenue generated from taxes and from the auctioning of tradable permits. Note that the use of specific policy instruments varies by sector and by country; for example, while some countries introduce water taxes, others might use water fees and charges[5] in the latter case, the revenue generated will not be accounted for in the *environmentally related tax revenue* shown here.

[2] Find a complete list of the ozone-depleting substances here.
[3] OECD (2023), *Methodological Guidelines for Environmentally Related Tax Revenue Accounts*, OECD Publishing, Paris, https://doi.org/10.1787/d752d120-en.
[4] This table is also included in the Annex A of OECD (2023), *Revenue Statistics 2023: Tax Revenue Buoyancy in OECD Countries*, OECD Publishing, Paris, https://doi.org/10.1787/9d0453d5-en.
[5] A *fee/charge* is defined as a compulsory payment to general government for which a good or a service is obtained. A *tax* is defined as a compulsory payment to any government authority for which the payer does not directly receive any goods or services in return, i.e. tax is an 'unrequited' payment.

Environmental domain

Environmental domains represent the focal issues (environmental externalities) covered by a certain policy instrument. Instruments can have both a direct and an indirect effect on several environmental domains; however, only the domain to which the instrument has a direct effect is considered. Contrary to the tax-base categories, multiple domains can be indicated for a single instrument. Therefore, aggregation across environmental domains is not possible because it may lead to double counting. The environmental domains[6] presented in the dataset include:

Environmental protection:

- *Air pollution*
- *Water pollution*
- *Soil pollution*
- *Solid waste*
- *Ozone layer*
- *Noise*
- *Radiation*

Natural resource management:

- *Fisheries*
- *Forests*
- *Freshwater*
- *Renewable energy*
- *Fossil fuels*
- *Minerals*

Cross-cutting domains:

- *Climate change mitigation*
- *Climate change adaptation*
- *Land degradation*
- *Biodiversity*
- *Ocean*
- *Chemicals management*
- *Energy efficiency*
- *Circular economy*

Total environment: All tax revenue containing at least one domain tag.

[6] See methodologies for tagging the 22 environmental domains: Chhun, B., et al. (2024), "Environmental domain tagging in the OECD PINE database", *OECD Environment Working Papers*, No. 232, OECD Publishing, Paris, https://doi.org/10.1787/be984b0a-en.

Unit of Measure:

Data are reported as:

- Millions national currency
- Millions USD current prices, using nominal exchange rates
- Millions USD constant 2015 prices, using PPP
- Percentage of total environmentally related tax revenue[7]
- Percentage of total tax revenue
- Percentage of GDP
- Revenue per capita, USD constant 2015 prices using PPP

Monetary values for the country groups OECD total, OECD Europe, OECD America and OECD Asia Oceania are calculated as the sum over the countries in the group. For these country groups, variables expressed as percentages and revenue per capita are calculated as weighted averages (e.g. revenue per capita for OECD total is calculated as the sum of revenue in OECD countries divided over the sum of population in OECD countries). A simple average, labelled *OECD average countries*, is the arithmetic average calculated for variables expressed as percentages.

Data on nominal exchange rates, purchasing power parities (PPPs), GDP deflators and Gross Domestic Product are obtained mainly from the *OECD National Accounts Statistics Database*, complemented with data from the latest *OECD Economic Outlook,* the World Development Indicators of the World Bank, and the World Economic Outlook of the International Monetary Fund.

Data on total tax revenue are obtained from the comparative tables of the *Revenue statistics in OECD Member Countries*, *Revenue statistics in Latin American and the Caribbean*, *Revenue statistics in Africa* and the *Revenue statistics in Asia and the Pacific* from the *OECD Tax statistics Database.* Total tax revenue data for China and India are obtained from the Government Finance indicators of the Asian Development Bank.

Population is the de facto population in a country, area or region as of 1 July of the year indicated. The main source of population data is the *World Population Prospects* dataset from the United Nations, complemented with data from the World Development Indicators of the World Bank.

Observation status

Note that some revenue streams have been estimated (Observation status: E *or estimated value*) and some category and domain aggregates are based on incomplete records (Observation status: U *or low reliability*), or have not been published due to a high percentage of incomplete information (Observation status: O *or missing value).*

For further details and revenue at the individual-tax level, please consult oe.cd/pinedatabase.

[7] Total environmentally related tax revenue corresponds to the revenue raised by *All tax-bases* for *Total environment*.