Environmentally related tax revenue

Dataset documentation

The OECD maintains a database of Policy Instruments for the Environment (PINE), originally developed in co-operation with the European Environment Agency (EEA). The database contains detailed qualitative and quantitative information on environmentally related taxes, fees and charges, tradable permits, deposit-refund systems, environmentally motivated subsidies and voluntary approaches used for environmental policy. The database is freely accessible at oe.cd/pine.

Environmentally related taxes are an important instrument for governments to shape relative prices of goods and services. A number of the characteristics of such taxes are included in the database (e.g. revenue, tax base, tax rates, exemptions, etc.). This information is used to construct the environmentally related tax revenue with a breakdown by tax-base category and environmental domain. Note that tax-base categories are mutually exclusive, while domains are not. Therefore, one should not aggregate revenue across domains as it will lead to double counting.

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 OECD Tax statistics database and official national sources.

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

For further details on the dataset consult the dataset documentation. For revenue data at the individual-tax level, please consult oe.cd/pine.

Last updated: April 2022

Contact: env.stat@oecd.org

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\(^{1}\)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.
**Environmentally related tax revenue**

**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 CO₂-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 charges⁵; in the latter case, the revenue generated will not be accounted for in the *environmentally related tax revenue* shown here.

**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

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² Find a complete list of the ozone-depleting substances [here](#).


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.
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 will lead to double counting. The environmental domains presented are:

**Total environment:** All environmentally related taxes.

**Air Pollution**
- fuel taxes, taxes on emission of air pollutants (e.g. on SOx and NOx), revenue from auctioning of tradable allowances, taxes on petroleum products, taxes on the use of motor vehicles etc.

**Biodiversity:**
- hunting and fishing taxes, taxes on pesticides, fertilisers, forest products and on timber, revenue from auctioned permits of individual transferable quotas for fisheries, etc.

**Climate change:**
- taxes on GHGs, fuel taxes, revenue from auctioned permits of emission trading systems for GHGs, energy taxes, taxes on road use, forestry taxes, etc.

**Ocean**
- taxes on energy products for maritime transport, use or ownership of maritime transport vessels, taxes on resource extraction from oceans, fishing licences, revenue from auctioning individual transferable quotas for fisheries, taxes directed at containing ocean pollution etc.

**Variables**

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.\(^6\)
- 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 arithmetic average*, is also 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](https://stats.oecd.org/), complemented with data from the latest [OECD Economic Outlook](https://www.oecd-ilibrary.org/oe.cd-economic-outlook), the World Development

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\(^6\) Total environmentally related tax revenue corresponds to the revenue raised by *All tax-bases for Total environment*.\(^6\)
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.

**Flags**

Note that some revenue streams have been estimated (E flag) and some domain aggregates are based on incomplete records (I flag). For further details and revenue at the individual-tax level, please consult oe.cd/pine.

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7 Published also at OECD.stat > Public Sector, Taxation and Market Regulation > Taxation