

OECD Policy Instruments for the Environment

Database documentation

The OECD maintains the *Policy Instruments for the Environment (PINE)* database, part of which was 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 www.oecd.org/env/policies/database.

The compiled information allows for in-depth comparisons of important environmental policy instruments across the countries covered. For example, it provides information not only about the amount of revenue raised via environmentally related taxes, fees and charges, but also about the tax bases countries use and the tax rates applied, major exemptions, refund mechanisms, and any upper ceilings on tax payments from different sources.

The database also provides much information on the other instrument types covered, such as the deposit and refund rates of deposit-refund systems; the target groups, the type of support (grant, soft loan, tax reduction, etc.) and the supported activity of environmentally motivated subsidies; as well as any legal underpinning and sanctions linked to voluntary policy approaches, etc.

The information contained in this database is obtained from contacts in relevant ministries (incl. finance, environment, etc.) of the OECD member and non-member countries, from official delegates to OECD meetings, national statistical institutes, legal decrees, etc. More recently, the coverage of the database has been gradually expanding to many non-OECD countries.¹

The present document summarises the working definitions used in the database and provides advice on ways to better classify and complement the information supplied to the database. More specifically, this document contains information on:

- A) The working definitions of the instruments covered:
 1. Taxes
 2. Fees or charges
 3. Tradable permits
 4. Deposit-refund schemes
 5. Environmentally motivated subsidies
 6. Voluntary approaches
- B) The criteria used to classifying instruments by:
 1. Environmental domain
 2. Industrial classification

¹ If you wish to contribute to the database please contact env.stat@oecd.org

3. Household expenditure classification

Definitions of policy instruments

1. Taxes

Environmentally related taxes are defined as any compulsory, unrequited payment to government levied on tax bases deemed to be of environmental relevance, i.e. taxes that have a tax base with a proven, specific negative impact on the environment. Taxes are unrequited in the sense that benefits provided by government to taxpayers are normally not in proportion to their payments. This means that there needs to be a redistributive element in order for a payment to be considered a tax. Environmentally related taxes increase the costs of a polluting product or activity, which tends to discourage its production or consumption, regardless of what was the intention behind the introduction of the tax. In this database, the term “levy” is used to cover taxes, fees and charges.

The tax bases covered include:

- *Energy* products
- *Transport* equipment and transport services
- *Pollution*, including measured or estimated emissions to air and water, ozone-depleting substances, certain non-point sources of water pollution, waste management and noise;
- *Natural resources*, such as management of water, land, soil, forests, biodiversity, wildlife and fish stocks, including mining and quarrying.

The tax base of environmentally related taxes may thus include both (i) the first-best taxes on the negative by-products (e.g. emissions) and (ii) the second-best taxes on inputs or (intermediate) outputs of a polluting activity (e.g. fuel purchases, ownership or use of a motor vehicle).

As such, taxes on NO_x emissions fall in the former category, while excise taxes on petrol, diesel, LPG or CNG for vehicles or taxes on mining activities (extraction and exploration rights) would fall in the latter category. In all these cases, the unrequited character holds when there is no proportionality between the environmental benefits of the taxpayers and their payments. However, borderline cases may occur and these cases are discussed below. Taxes on resource rents (or any other taxes on profits) are not included in the definition of environmentally related taxes, because they do not affect relative prices,² while revenues from auctioning of emission permits are included and labelled as “taxes”.

The database does not provide information on physical data, or effective tax rates.

² This definition is fully aligned with the SEEA 2012 – Central Framework.
http://unstats.un.org/unsd/envaccounting/seeaRev/SEEA_CF_Final_en.pdf

2. Fees or charges

Fees and charges are defined as compulsory requited payments to the government that are levied more-or-less in proportion to the services provided. In this database, the terms "fees" and "charges" are used interchangeably. The main difference between taxes and fees/charges is the type of beneficiary: fees are paid for government services directed at a specific beneficiary, while taxes are used to raise revenue to fund general (or specific) government expenditure.³

For example, a wastewater payment which varies according to the volume of water consumed would constitute a fee/charge, while a wastewater payment which varies according to the amount of pollution generated would be classified as a tax. This is because, in the first case, the benefits provided to taxpayers correspond to the volume of water consumed, while in the second case the payment does not mirror government's benefits proportionally, but instead targets the pollution generated – which is here the redistributive element.

A levy could be considered as unrequited in the following cases: where the payment greatly exceeds the cost of providing the service, where the payer of the levy is not the receiver of the benefit, where the government is not providing a specific service in return for the levy which it collects or where benefits are received only by those paying the levy but the benefits received by each individual are not necessarily in proportion to his payments.

3. Tradable permits

Tradable permits are market-based instruments that provide allowance or permission to engage in an activity. These permits are often used to allocate pollution rights, and they can be issued under a trading system. There are two main types of trading systems: "cap-and-trade systems" and "baseline-and-credit systems". In a cap-and-trade system, an upper limit on allowances is fixed, and the permits are either auctioned out or distributed for free according specific criteria. Under a baseline-and-credit system, there is no fixed limit on emissions, but polluters that reduce their emissions more than they have to are obliged to can earn 'credits' that they sell to others who need them in order to comply with regulations they are subject to. For the purpose of the database, the terms "permits" and "allowances" are used interchangeably.

In the database, tradable permits schemes can be divided in different subs-schemes e.g. according to the way in which permits are allocated. For instance, quotas that are grandfathered to one sector while auctioned to other sectors would be registered in two separate sub-schemes. In addition, there could be a variety of broader tradable permits system with special rules for a given sector (e.g., the steel sector); in such cases, the sub-scheme name could be the same as for the broader scheme with the addition "-- in the steel

³ Data availability for fees and charges is generally not as good as for taxes, partly because fees are often collected by local governments.

sector". Moreover, noting that information about market prices are missing for a number of tradable permit schemes, generally only some examples of permit prices are given in the database. Additionally, since few permits have been auctioned in the past, information about revenues is still limited, but it is increasing due to the gradually more common practice of auctioning.

The most common type of tradable permit sets a cap on pollution emissions. Other types of tradable permits include the green certificates, where the commodity (i.e. permit) represents a fixed amount of electricity from renewables that can be traded in order to comply with renewable energy quotas established by the government. Additionally, another type of tradable permit requires packaging producers to pay a proportion of the cost of recovering and recycling their packaging through a set of certificates issued by accredited re-processors when packaging waste is recycled or recovered, and that can be purchased by obligated companies on the open market.

4. Deposit-refund schemes

Deposit-refund schemes are market-based instruments consisting of a combination of a product charge (the deposit) and a subsidy for recycling or proper disposal (the refund), generally with the objective to discourage illegal or improper disposal. These can be either voluntary or mandated by government legislation. Deposit-refund systems allow for high collection rates and high quality of collected material, which makes it possible to use recycled instead of new material and reduces the need of extraction of natural resources. Deposit-refund schemes can comprise different sub-schemes, e.g. according to the object they are addressing. This is the case of deposit-refund systems for beverages, which include glass and plastic bottles, as well as aluminium cans.

One of the most popular forms of deposit-refund system are beverage container recycling programmes, which include the collection of a monetary deposit on reusable packaging of beverages at the point of sale, combined with a refund being paid out when the empty containers are being delivered back to selected collection points. Similar systems are also in place for car hulks as well as for waste oil. This means that one can get a refund for delivering used lubricating oil to selected collection points.

5. Environmentally motivated subsidies

A subsidy is defined as environmentally motivated if it reduces directly or indirectly the use of something that has a proven, specific negative impact on the environment. The database covers environmentally motivated subsidies consisting of payments from government to producers, or of preferential tax treatments with the objective of influencing the level of production, the price, or the remuneration of the factors of production.

Environmentally motivated subsidies could take the form of a VAT exemption or another favourable tax treatment, such as the VAT exemption for electrical vehicles. Alternatively, these subsidies could take the form of feed-in-tariffs and premiums⁴ for renewable energy production or tax credits for investment in renewable energy sources. Other types of environmentally motivated subsidies would be grants or loans totally or partially financing projects or activities aimed at protecting or restoring the environment, nature preservation or conservation of environmental heritage. Environmentally motivated subsidies can also be divided in different sub-schemes, e.g. according to the type of support (loans, guarantees, tax-preferences etc.) and to the specific target they are addressing.

6. Voluntary approaches

Voluntary approaches in environmental policy include all voluntary instruments whereby firms or industries make commitments to improve their environmental performance beyond what the law demands. These could be agreements on environmental performance negotiated between a government authority and one or more private parties, with the aim to improve environmental performance beyond compliance to regulated obligations. Moreover, voluntary approaches also include industries' negotiations on a certain standard of behavior, which could involve the participation of third parties to monitor compliance, as well as unilateral action by industry. Voluntary approaches can be divided in a set of sub-schemes according to the characteristics of the organizations, e.g. under a voluntary commitment to increase energy efficiency of the energy intensive sector of a country so as to reduce the emissions of greenhouse gases sub-schemes can distinguish a federation of organizations working with steel production from a national farmers' union.

Voluntary approaches can include special environmental performance agreements, whereby government bodies and industry organisations agree to act on the basis of specific design criteria, clear environmental objectives and measurable results. Other types of voluntary approaches consist of a set of agreements between the government and certain industries so as to promote environmentally friendly activities, such as agreements on improved industrial energy efficiency and recycling of packaging and containers used in transport. Environmentally related labelling schemes that firms can choose to adhere are also included among voluntary approaches.

⁴ Feed-in tariffs are long-term contracts offering a fixed price for the renewable energy produced. It is a policy mechanism aiming to accelerate investment in renewable energy technologies. Feed-in premiums offer a premium over the electricity market price for the duration of the contract.

Classifying policy instruments

The name or the expressed purpose of a given instrument is not a criterion in this database. Instead, the focus is on the potential environmental effects of a given instrument, which is determined by the impacts on the producer and consumer prices in question, in conjunction with the relevant price elasticities. Thus, instruments are classified according to their **direct** effects on certain environmental domains, industries and household expenditure categories. Potential indirect effects are generally not recorded in the database.

A. Environmental domains

Environmental domains represent the focal issues (environmental externalities) covered by a certain policy instrument. They include: water pollution, air pollution, climate change, land contamination, waste management, natural resource, biodiversity, noise, ozone layer, energy efficiency, transport, land management. 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 indicated in the database. Multiple domains can be indicated for a single instrument. For example, a tax on motor vehicle fuel will have climate change, transport, energy efficiency and air pollution as its domains.

In reality, every domain could be related indirectly; hence, the classification by domain is most valuable if only used in a direct narrow sense. For instance, landfill taxes have a direct effect on waste management, but they may also have an indirect effect on climate change through reduction of methane emissions. In this case, only the waste management domain is indicated as domain.

B. Industry classification

The industrial classification of each instrument's sub-scheme follows the International Standard Industrial Classification of All Economic Activities (UN ISIC Rev 3.1 classification). These categories classify the sub-schemes (bases of an instrument) according to the economic sectors that would be directly or strongly indirectly affected by the sub-scheme in question. Each sub-scheme could then relate to more than one ISIC sector.

C. Household expenditure classification

The household expenditure classification relates to the Classification of Individual Consumption According to Purpose (UN COICOP classification), used to classify both individual consumption expenditure and actual individual consumption according to certain sectors here selected as the ones relevant to environmental policy. Each sub-scheme could relate to more than one COICOP sector. Each instrument in the database could also be included both in the ISIC and in the COICOP classification.