



EUROPEAN COMMISSION  
EUROSTAT

Directorate E – Sectoral and regional statistics  
**E.2 – Environmental statistics and accounts; sustainable development**

# **Guidance material for the Eurostat PEDS compilation**

## 1. ABOUT THIS DOCUMENT

This document provides guidance for the voluntary Eurostat PEDS compilation. The guidance is unchanged compared to the one distributed for the 2022 data collection and it is still open for improvements.

The sections in this document correspond to *Conceptual framework: Definitions and scope* (Section 2); *Framework for reporting* (Section 3); and *PEDS questionnaire: Structure and guidance for reporting* (Section 4).

## 2. CONCEPTUAL FRAMEWORK: DEFINITIONS AND SCOPE

This section presents an overview of the main characteristics of PEDS in the context of the existing framework for the monetary environmental accounts. It provides clarifications on the scope, definitions and terminology underlying PEDS.

### **Meaning of ‘Potential Environmentally Damaging Subsidies’**

#### ‘Potential’

The delimitation of the scope of ‘Potential Environmentally Damaging Subsidies’ is determined by the term itself. Another term, Environmental Harmful Subsidies (EHS), appears also in the Environmental Subsidies and Similar Transfers (ESST) handbook (See [5] - section 1.5, page 22). This term is also used by other EU policy initiatives (See [2] and Annex 1).

The term ‘potential’ reflects some degree of uncertainty about the actual effect of the transfer. The omission of this word seems to indicate strong evidence about the actual damage to a specific environmental domain. In this context, PEDS or EHS are not mutually exclusive. The term PEDS allows for more flexibility in the definition of the scope.

#### ‘Environmentally damaging’

The meaning of ‘environmentally damaging’ term can be explained from two different perspectives.

Concerning the environmental area, the flagship initiative is the measurement of air emissions by fossil fuel combustion. Therefore, fossil fuels constitute the focus of the proposed PEDS compilation. Nevertheless, there is also the possibility to report any other product or activity affecting air emissions; biodiversity; soil, groundwater and surface water; natural resources depletion, etc.

The second perspective of the PEDS project focuses on distinguishing between the production side and consumption side of fossil fuels. In principle, most of the direct

damage to environment occurs through consumption of fossil fuels by users. Nevertheless, whenever there is a support measure for producers of fossil fuels, this contributes to affordability of consumption, and it could be considered as (potentially) damaging, as well. The scope of activities that are producing fossil fuels can be enlarged to cover upstream activities: mining activities for extracting oil, coal or natural gas. In addition, it could also be extended to downstream activities such as transport services, gas station activities and even R&D activities linked to the discovery of new oilfields or the design of new kind of fossil fuels. Eurostat, has decided to propose two different solutions depending on the variable to estimate (See section 3).

*Type of support measure: 'Subsidies' and more*

Transfers may be classified in different ways depending on what set of criteria are to be evaluated. A first possible classification criterion appears to distinguish producer/supply side from consumers/demand side. Classification's name also varies depending on what study is taken: classification by "Statutory form or Incidence (to whom and what a transfer is first given)" in UNEP's<sup>(1)</sup> methodology (See [11] and Annex 1); classification by "Purpose" in the study by DG ENER (See [10] - section 2.1)

The European System of Accounts (ESA-2010), through distributive transactions (code D), classifies transfers in a different way. The distributive transactions relevant in this case, as they (may) refer to transfers provided by the general government, are: D.3<sup>(2)</sup>, subsidies; D.6, social contributions and benefits; D.7, other current transfers; D.9, capital transfers. Further split is relevant for such transfers, considering whether they are: 1. direct or indirect and 2. explicit or implicit.

The distinction between direct and indirect corresponds to how the transfers affect fossil fuels in terms of quantities/prices.

The distinction between explicit and implicit refers to how the transfer is reflected in the public budget.

Explicit transfers, understood as any observable and reported transaction in the official budget, can influence the price directly or indirectly. These transfers correspond to (D.3, D.6, D.7, D.9) distributive transactions in ESA-2010 as mentioned above. They involve the release of funds by the general government.

Implicit transfers are any other support that it is not directly observable. It can be in the form of tax abatement, but also in an indirect form through preferential treatment, risk transfer, etc.

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<sup>(1)</sup> United Nations Environment Programme

<sup>(2)</sup> Definitional clarification: The term "Subsidy" and "Transfer" are used, here, as if they were synonyms, although the most correct naming is Transfer, which according to ESA-2010 terminology contains subsidies, among others. In fact, most projects are referring to World Trade Organization's (WTO) definition of subsidy Agreement on subsidies and countervailing measures, point 1.1), which is actually closer to Transfer definition in ESA-2010 than to Subsidy (D3).

Therefore, despite being used frequently the term ‘direct subsidies or direct transfers’, strictly speaking, reference to any tangible financial contribution to fossil fuel use or production means actually ‘explicit transfers’, which might be direct in the form of subsidies to the production or the product or indirect through capital transfers or other current transfers <sup>(3)</sup>.

Tax abatements would be an implicit direct transfer if they affect a carbon specific tax or an excise tax. They could also be implicit indirect transfer, if the tax abatement is on taxes not directly affecting the price/quantity. Other implicit indirect transfers are, as mentioned above, preferential treatment, risk transfers, etc.

**Explicit transfers are included under the scope of the PEDS compilation. Implicit transfers** (tax abatement, tax credits, preferential treatment, etc.) **and externalities are outside the scope.** Economic externalities consider as a transfer the failure of actual taxation to reach an optimal level, required to satisfy environmental objectives or environmental costs. Several countries and international organisations are testing tax abatement calculations, and their results show that estimates can be produced. However, Eurostat considers this work needs further development to ensure the quality expected from official statistics. See detailed explanations of the methods to estimate implicit transfers and the problems associated to each of them in Annex 2.

Eurostat realises the exclusion of implicit transfers might lower relevance. Eurostat considers that the introduction of the Average Effective Carbon Rates (AECR) variable might fill this gap. This metric might be of great relevance for users, as it can be observed in Annex 1, with projects working on similar concepts.

The concept called Effective Carbon Rates (ECR) was originally developed by the Organisation for Economic Co-operation and Development (OECD) (See [9]) cross-classified by country, fuel and sector. In the European Statistical System, countries provide data on Air Emissions Accounts (AEA) (See [6]), Physical Energy Flow Accounts (PEFA) (See [4]) and Environmental Taxes by Economic Activities (ETEA) (See [3]) according to the classification of activities (NACE). Therefore, by selecting the relevant energy taxes, countries can develop average effective carbon rates, as a metric reflecting the average amount of taxes imposed to a set of tonnes of CO<sub>2</sub> emitted from the consumption of fossil fuel by each industry (NACE) producer or household. This indicator may be a first step for possible, future, more refined calculations e.g. distinguishing between transport and heating (or stationary and mobile). It would more correctly reflect the very different taxation of fuels for transports and heating or for industrial purposes.

Such a metric can also be compared against different benchmarks, from normal tax or tax on other products to optimal tax as defined by each specific organisation (See Annex 2).

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<sup>(3)</sup> Arguably, allowances for the purchase of fossil fuels to households, belonging to D.6 code, can be considered also direct.

The AECR indicator does not make the PEDS compilation a dual project. The main objective remains to cover transfers related to support fossil fuels and other activities and products potentially damaging for the environment. The AECR metric aims to increase relevance for the users and to be a tool to test different calculations, especially to test the possibility of including in the future implicit transfers in the form of tax abatements in a comparable way.

### Potential environmentally damaging subsidies within monetary environmental accounts

Until the development of the PEDS project, the monetary environmental accounts referred to: Environmental Goods and Services Sector (EGSS) (See [7]), Environmental Protection Expenditure Accounts (EPEA) (See [8]), ESST and ETEA.

The PEDS compilation project will be integrated within the monetary environmental accounts as synergies and/or commonalities exist between the different accounts.

**Table 1. Scope of PEDS within other monetary environmental accounts**

		Type of transfer (government-related)		Rest of transactions in the economy
		Taxes	Subsidies (+Tax abatement)	Production, consumption, accumulation
Scope	Environmental activities/products	-	ESST	EGSS, EPEA <sup>(4)</sup>
	Environmentally damaging activities/products	ETEA	PEDS	-

Firstly, in terms of impact, while EGSS, EPEA and ESST regard to positive impacts on the environment, PEDS and ETEA regards to some damaging impacts.

Secondly, the institutional sectors (government, corporations, households) concerned by the accounts are similar for ESST, ETEA and PEDS: the performance of the economy related to the environment by the general government is quantified there, while, in EPEA and EGSS, measurement focuses on the economy as a whole. Lastly, an additional subdivision can be established regarding the instrument (kind of transfer). In the case of ETEA, ESST and PEDS, the instruments are either taxes or subsidies.

Therefore, PEDS has a similar scope as ETEA in terms of impact of the activities, being focused as well on the economic behaviour of the government, but with the opposite instrument/kind of transfers. On the other side, **PEDS has the opposite scope of activities as ESST**, being focused as well on the economic behaviour of the government through the application of the same kind of instruments/transfers (See Table 1). The fact that ESST and PEDS have opposite scopes is significant for the delimitation of the specific transfers to be included, since it implicitly involves that transfers included in ESST cannot be part of PEDS, and vice versa.

<sup>(4)</sup> EPEA, in particular, also includes taxes and subsidies, as a step needed for its main aggregate, NEEP (National Expenditure on Environmental Protection).

The general framework for PEDS and its conceptual links to the other monetary environmental accounts is now set. The following steps are to develop the concepts to be covered in PEDS compilation, to give a set of definitions and propose a set of variables aligned with the definitions. One challenge in PEDS, compared to other monetary environmental accounts, is the potential subset of activities or products damaging for the environment, which is much larger than the activities or products that have a significant positive impact

In section 3, the scope will be delimited in further detail, from a technical point of view.

### **3. FRAMEWORK FOR REPORTING**

This chapter presents technical details on the characteristics to be reported in the Eurostat PEDS data collection. Criteria in the selection of the transfers are detailed to ensure comparability in the data reporting. Then, the section provides possible data sources.

#### **3.1. Reporting characteristics**

PEDS data compilation has three key components:

- Fossil fuel subsidies;
- Other potentially environmentally damaging subsidies;
- And average effective carbon rates.

#### **ESA transfers – Fossil fuels**

Explicit transfers supporting fossil fuels refer to distributive transactions (by the government sector to corporations or households), as in ESA-2010, to support fossil fuel production and consumption. This general statement requires the following clarifications:

- ESA transfers of interest are those supporting fossil fuel production and consumption (See Box 1)

From the production side, the scope covers the ESA transfers, which are allocated to producers of fossil fuels in all parts of the production cycle, to the extent the fossil fuel is concerned.

The scope concerning the consumption of fossil fuels includes those ESA transfers that are either supporting consumption in national currency per physical unit of product or with a fixed amount of money, to the extent it can be linked to the consumption of fossil fuels. The link can be through invoices, receipts or any other purchase proof required to receive the funds. Legislator

motivation/statements explicitly indicating the purpose of supporting fossil fuel purchases are also valid.

- Distributive transactions, for the purpose of PEDS compilation are: D.3, Subsidies; D.6, Social contributions and benefits<sup>(5)</sup>; D.7, Other current transfers; D.9, Capital transfers. Further detail on sub-codes of D.3, D.6, D.7 and D.9 to consider in the PEDS compilation is expected in future updates <sup>(6)</sup> of the PEDS data collection.
- Transfers supporting the production or consumption of fossil fuel-based products, such as plastics, are excluded from the scope of fossil fuel transfers. Nonetheless, those transfers could be included in the other PEDS category as long as they support products that have a damaging impact on the environment (negative impact on waste; soil, groundwater, surface water and marine water; fauna and flora; management of fossil resources)
- These guidelines do not propose a specific delimitation of 'Fossil fuels'. Rather, for the purpose of PEDS compilation, the classification of energy products developed for PEFA is the reference <sup>(7)</sup>. In particular, fossil fuels (subsequently subsidies associated to them) are: P08 Hard coal; P09 Lignite & Peat; P10 Derived gases (= manufactured gases excl. biogas); P11 Secondary coal products (coke, coal tar, patent fuel, BKB and peat products); P12 Crude oil, NGL, and other hydrocarbons incl. Oil shale/sands(excl. bio); P13 Natural gas; P14 Motor spirit (without bio); P15 Kerosenes & jet fuels (without bio); P16 Naphtha; P17 Transport diesel (without bio); P18 Heating and other gasoil (without bio); P19 Residual Fuel Oil; P20 Refinery gas, ethane & LPG 2 P21 Other petroleum products incl. additives/oxygenates and refinery feedstocks.

Transfers to support biofuels are out of the scope of PEDS <sup>(8)</sup>.

- Transfers supporting electricity generation and transportation activities will be included if and only if they satisfy the same requirements as in the first bullet point (See Box 1).

### **Box 1. Borderline cases of transfers on production side and consumption**

Whenever fossil fuels are more affordable, there is more consumption and therefore, more damage to the environment. However, depending on the breakdown in the data sources, transfers could correspond to activities linked to the production of fossil fuels,

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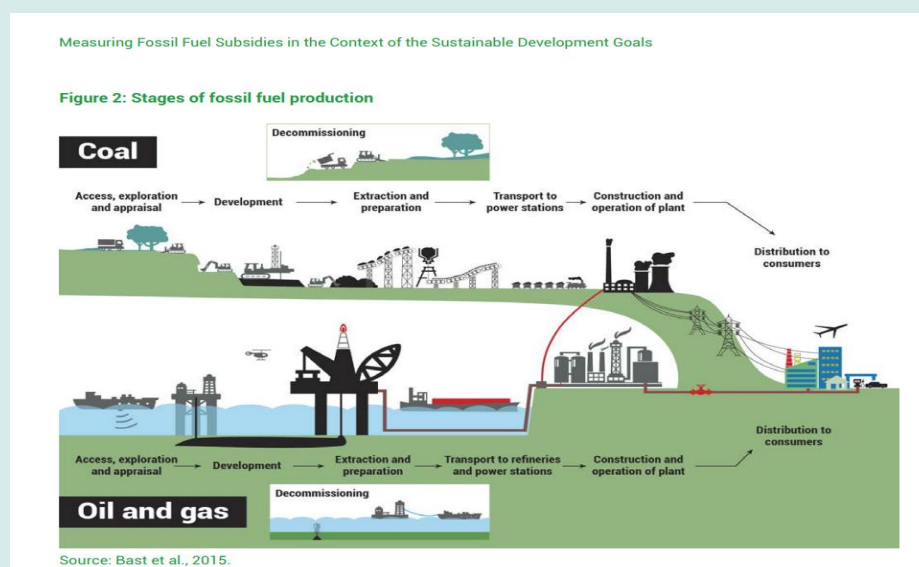
<sup>(5)</sup> D.6 transfers are included to the extent they are linked to consumption (production would be strange) of fossil fuels in the same terms as described in the previous paragraph.

<sup>(6)</sup> Gathering information on this topic is one of the objectives of the 'Catalogue of measures' (See section 4)

<sup>(7)</sup> See [1] and [4] -Annex 1

<sup>(8)</sup> Support measures to biofuels production and consumption have been excluded for all the projects referred in Annex 1. In addition, transfers to support biofuels might be part of ESST. This convention, then, aligns to the exclusive definition of ESST and PEDS (see section 2)

but also of other products. For example, subsidies to NACE 19 ‘Manufacture of coke and refined petroleum products’ can be included automatically, while transfers to NACE B ‘mining and quarrying’, may not be considered fully. NACE B includes mining activities related to other minerals than fossil fuels (see the scheme of production cycle below). Examples can be transfers to support the investigation and discovery of new oilfields, subsidies to transportation and distribution of fossil fuels in remote areas, subsidies to the construction of installations for regasification of LPG, etc. Transfers to gas station (e.g. to gas stations in remote areas) are to be included, if fuel distribution is the main activity (more value added, according to NACE explanatory notes).



Source: (See [11] - figure 2, page 7)

On the consumption side the principle is similar: fossil fuel subsidies to consumers will be considered if the link to consumption of fossil fuels is clearly established. It is possible that transfers that will, in practice, lead to higher fuel consumption are excluded (see examples below). The rationale is that if transfers supporting fossil fuels consumers in general were included, the whole economy is to be considered, being some threshold of intensity necessary (See annex 3) to consider sectors that are included and sectors that are excluded. Such a threshold would be extremely arbitrary.

Examples to be included in fossil fuel subsidies:

- A subsidy to support fossil fuel purchases - requiring to be proved through invoices or any other documentation or by the legislative purpose - for an air company
- A subsidy to a Combined Heat plant for the acquisition of diesel
- Discount bonus to be spent in gas stations by households.
- CO<sub>2</sub> compensation schemes granted to industries, to prevent carbon leakage.

Examples to be excluded from fossil fuel subsidies:



- General allowances to support vulnerable households heating (unless it can be directly linked to discount in fossil fuel acquisition for those purposes)
- Support to stations for electricity generation based on diesel combustion in islands and remote areas (except if the support is through a discount in €/l or in the diesel purchases)
- Subsidies to air companies and road transport in trips to remote areas and islands (except if it is in the form of a subsidy for fuel purchases). Allowances to the passengers are also excluded.

### **ESA transfers – Other PEDS**

ESA transfers collected under other PEDS refer to transfers (the same set of ESA-2010 distributive transaction as in fossil fuels) that are granted for other activities and products different of fossil fuels and that are potentially damaging the environment (air, soil, water, biodiversity, etc.) and/or putting at risk the maintenance of the stock of natural resources.

The general principles described for fossil fuels apply in order to determine border cases. The link between the transfer and the environmentally damaging product needs to be clear. Let's take the example of fertilizers. Fertilizers are considered as damaging for the environment. Some users of fertilizers may receive a subsidy. This subsidy will be included only if specifically devoted to support the purchase with a direct discount in the price or with lump sum/allowance or the like.

These general guidelines for other PEDS serve as a starting point. Compilers are expected to detail the other PEDS reported. Future data collection will serve for a better identification of the subsidies to include. Based on the experience gained through the first data collections, compilation guidance will be improved.

### **Average effective carbon rates: Taxes and emissions**

The definition of AECR indicator for the PEDS reporting is: the average price paid for CO<sub>2</sub> emissions (through the amount of actual taxes imposed on fossil fuels combustion divided by CO<sub>2</sub> emissions associated to fossil fuel combustion) by the economic agents.

To ensure comparability across countries, the AECR metric should follow these specifications:

- The metric is defined as a ratio between taxes and emissions. Taxes must be a subset of energy taxes as reported in ETEA, while CO<sub>2</sub> emissions must be a subset of total CO<sub>2</sub> emissions reported in AEA.
- The subset of CO<sub>2</sub> emissions from AEA are those associated to fuel combustion (use side) (See Box 2). AEA can be compiled with an inventory-based approach. In AEA, emissions associated to common reporting format

(CRF) code 1.A <sup>(9)</sup> are allocated to the different activities and households as final consumers. AEA can also be compiled based on the application of emission factors to PEFA results, complemented by other ancillary information. In both cases, CO<sub>2</sub> emissions associated to fuel combustion must be available, by mapping the emissions from CRF 1.A or selecting the emissions coming from the application of the emissions factor to PEFA (energy products mentioned above.)

## Box 2. Production side in the average effective carbon rates

It can be noted that for the AECR metric, the scope differs from fossil fuel subsidies concerning the distinction producer/consumer. It is not a methodological choice; rather, it is derived from the concept of average effective carbon rates itself. As an indicator trying to estimate price for emissions, it irremediably requires including the emissions to which the taxes are to be related. Emissions are derived from fossil fuel combustion (use). Therefore, to keep the AECR representative of the price imposed to CO<sub>2</sub> emissions, it is convenient to keep focused on the taxes that are associated to fossil fuel users. Certainly, if a particular tax is introduced within the production chain (specifically related to fossil fuels), it could be seen as an increase in the *price* the consumers will face in the end of the chain, but this spill over effect is more indirect.

There are also practical reasons not to consider taxes on the production side. In particular, existing taxes are likely general taxes, such as tax on corporate income. Its inclusion would go against the general spirit of this metric. Certainly, in the mining industry, fees are frequent in order to obtain the rights to operate mining sites, but again it is too indirect, since this burden would be circulated to the industry producers, then to the distribution side, and finally to the consumer.

- Other greenhouse gases, such as methane (CH<sub>4</sub>) or nitrous oxide (N<sub>2</sub>O)(See Box 3) are not included. Similarly, CO<sub>2</sub> emissions originated from industrial processes and other CRF categories not linked to fossil fuel combustion are excluded.

## Box 3. Greenhouse gases other than CO<sub>2</sub>

Arguably, the other GHGs associated to fuel combustion could be included. They also have negative impact on the environment. Furthermore, apart from GHG, other

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<sup>(9)</sup> Common Reporting Format is the classification used for reporting Greenhouse Gas emissions within the United Nations Framework Convention on Climate Change (UNFCCC), to which National Inventories submit data. 1.A. corresponds to emissions from energy/fuel combustion

substances, such as nitrogen oxides (NO<sub>x</sub>) are emitted by fossil fuel consumption. Excise taxes and similar taxes, as well as Emissions Trade System (ETS) payments are associated to those emissions, too. This fact will translate in an overestimation of the AECR metric, as it is defined. Indeed, it is equivalent to assume that those taxes are only linked to CO<sub>2</sub> emissions. However, emissions associated to fossil fuel combustions due to other GHG represent a very low value and therefore will not impact much the AECR indicator.

For example, based on 2017 data of the national inventories in Spain, CRF 1.A. emissions of CO<sub>2</sub> accounted for 245,430.67 Gigagrams, CH<sub>4</sub> were 2,120.19, and N<sub>2</sub>O 1,946.17 (both expressed in CO<sub>2</sub> equivalent). The two substances, CH<sub>4</sub> and N<sub>2</sub>O, represent less than 2% of all emissions. It is most likely that the same distribution pattern apply to many countries. These two substances could be included in the metric if we would refer to the pricing on GHG emissions, and not to CO<sub>2</sub>.

For other substances, different from GHG, a numeric example is not possible, because: 1) Data are not expressed in CO<sub>2</sub>, since they are not GHG; 2) Differences can be larger, due to different age of transport vehicles stock, different percentage of diesel vs gasoline, etc.

#### Source for the numeric example:

National Inventory website in Spain: <https://www.miteco.gob.es/en/calidad-y-evaluacion-ambiental/temas/sistema-espanol-de-inventario-sei-/default.aspx>

- Taxes for the calculation of AECR are *actual taxes*, which is how they are also reported in ETEA. Taxes represent the amounts received by the government units, once tax abatements are *deducted*.
- The specific taxes to be included in the estimation of the AECR are:
  - o Carbon-specific taxes, where the tax base relates to the carbon content of the fuel. Denominations for this kind of tax can vary. It is also possible that it exists more than one kind of these taxes. Anyhow, as long as it is expressed in monetary units/CO<sub>2</sub> or specifically stated out as taxing CO<sub>2</sub> emissions, they must be included.
  - o Excise taxes on fossil fuels and similar. These taxes are usually taxes imposed on fossil fuels, which are not expressed in terms of the carbon content, but in kWh, litres or kilograms. Denominations for this kind of tax can vary. It is also possible that it exists more than one kind of these taxes (See box 4). Anyhow, as long as it is expressed in monetary units/physical unit or specifically stated out as taxing fossil fuels products, they must be included.
  - o Payments associated to the ETS for the installations subject to them. ETS payments refer to the money paid by the installations. The inclusion of these payments are subject to the same rules as in ETEA, concerning the difference in the moment of surrendering the permits and the particularities concerning the international trade of them (See [3] - section 2.5 page 15).

In addition, ETS payments by installations subject to this scheme include as

well the payments linked to emissions in the industrial processes not coming from fossil fuels. Then, full inclusion of these payments might lead to some overestimation (see suggested methods to solve it, box 5).

- Determining the specific codes within the distributive transactions codes in ESA-2010 is not essential. The AECR indicator requires a subset of the taxes reported in ETEA. Subsequently, they are based on the National Tax List, where taxes are presented with the associated D-code. Nonetheless, for the sake of clarity, taxes mentioned above and to be included in the AECR calculation are: D.2 Taxes on production and imports and possibly D.7, Other current transfers.
- Electricity excise taxes and other taxes imposed on electricity production/consumption are not included (See box 6).
- The concept of fossil fuels is the same as in PEDS-ESA transfers. Therefore, taxes on biofuels are not included.

#### Box 4. Excise duty on fuels and the like. Ireland example

Under the energy taxation directive (2003/96/EC of 27 October 2003), energy products for fuel transport and electricity are subject to taxation. The directive establishes minimum rates for the different kind of fossil fuels. In Ireland, for the estimation of the AECR metric, excise duty on mineral oils are included. However, in addition to that tax, the NORA levy is identified.

Quoting Ireland's description in the methodology publicly available: *'The NORA Levy is charged at a rate of 2 cents per litre on oil products such as petrol, autodiesel and kerosene. The NORA Levy is used to fund the acquisition and storage of strategic oil stocks. It does not apply on fuel used for international aviation or maritime transport.'*

This is a clear example of a tax (or fee) imposing a cost in terms of €/litre. This tax must be incorporated to the AECR in the corresponding NACE producers or Households to whom the tax is charged

#### Relevant sources:

Ireland's methodology: <https://www.cso.ie/en/methods/surveybackgroundnotes/fossilfuelsubsidies/>

European Union taxation and customs website: [https://taxation-customs.ec.europa.eu/taxation-1/excise-duties/excise-duty-energy\\_en](https://taxation-customs.ec.europa.eu/taxation-1/excise-duties/excise-duty-energy_en)

Energy Taxation Directive: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:283:0051:0070:EN:PDF>

#### Box 5. Practical approach to the inclusion of ETS payments

In order to keep the inclusion of ETS aligned with the concept of AECR, ETS payments should be included after deducting the part of the ETS payments associated to CO<sub>2</sub> emissions coming from other processes different from fossil fuel consumption. Very detailed data on emissions subject to the ETS system exist through the European Union

Transaction Log conducted by the European Commission (DG CLIMA) or in the EU ETS data viewer <sup>(10)</sup> by the European Environment Agency (EEA). The Emission Spot Primary Market by the European Energy Exchange group proposes a database mostly focused on prices and on the allowances' exchange. Nonetheless, none of those data sources can provide the breakdown of the ETS payments required for the purpose of the AECR metric. This is simply because such a breakdown does not exist conceptually, being the allowances and the trade among installations based on packages of emissions, as a whole.

Therefore, these guidelines recommend first to include ETS payments that are linked only to fossil fuel combustion and second to estimate the ETS payments using a ratio as a proxy. The ratio is applied to the values of ETS payments that are already included in ETEA. The application of such a ratio contains the implicit assumption that payments are not subject to different payments if they proceed from fossil fuel combustion or other processes (which seems to be the case as mentioned in the previous paragraph).

For the estimation of the ratio, these guidelines propose two alternatives:

- a close co-operation with national inventories. This co-operation is likely to be already in place for most countries compiling AEA. In order to report data classified according to the CRF to fulfil the reporting requirements for the UNFCCC, the emissions originated from the installations subject to ETS payments must be available, at least, at the micro data level. An *ad hoc* outcome from these micro data can be asked, containing the allocation of the CO<sub>2</sub> emissions from these installations to the different CRF, and from them, a split between CRF 1.A and the rest of categories. A direct access to the micro data is even more advisable than using the activity delimitation provided in the inventories. Micro data use allows allocating better, installations to the corresponding activities (NACEs).
- the use of AEA allocation of emissions across activities (NACEs). In this way, for AEA compiled based on the allocation of National Inventories emissions (classified by CRF), tabulation of the content of emissions of each NACE coming from CRF 1.A, 1B,...etc. should be readily available. In this way, the ratio for each NACE can be constructed and applied to the value of ETS payments allocated by ETEA to the corresponding NACE. This option is the second best mainly because the ratio compiled will include all companies, not only those subject to ETS. Therefore, the accuracy of this ratio relies on the structure CRF 1A / Rest of CRF is similar. If this is not the case, at least, companies not subject to ETS should be not very relevant in terms of emissions.

#### Relevant sources:

EEA dedicated section in the website: <https://www.eea.europa.eu/data-and-maps/data/european-union-emissions-trading-scheme-17>

European Commission dedicated section in the website: [https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/union-registry\\_en](https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/union-registry_en)

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<sup>(10)</sup> The EU ETS data viewer of the EEA is based on the EU Transaction Log with some additional adjustments.

## Box 6. Taxes on electricity

There are two types of taxes linked to electricity, both with the same arguments to be excluded from the scope, although those arguments affect differently.

The first type is taxes levied on electricity generation. The second one is taxes imposed on electricity consumption.

For the taxes levied on electricity generation, the tax base is the volume of electricity generated in kWh. The rates are in monetary unit/kWh. If no additional information is available, this tax does not distinguish electricity generation from fossil fuels, renewable or nuclear. Because renewable or nuclear energy do not produce any emissions, taxes related to both energies should not be included in the AECR indicator. Even in the case of these energy sources being exempted from the tax, their inclusion is still not advisable for comparability reasons between countries. Another reason to exclude it relies on the delimitation of fossil fuel transfers from the consumption side: the criteria based on the intensity in fossil fuel consumption of an activity is not retained in the PEDS transfers. Similarly, in this case, the fact that electricity generation consumes large amounts of fossil fuels in the production process is not a reason to consider taxes imposed on that as part of the AECR metric. If taxes on every single producer and product having consumption of fossil fuel in their production process would be included, one needs to set a threshold of intensity in the use of fossil fuel. Such a threshold would be arbitrary and may create non-comparable data at EU level.

The second type of taxes are taxes imposed on electricity consumption. The first reason for their exclusion lies in the indistinguishable source of the electricity (production might be distinguished and exemptions applied to renewable sources, but consumption cannot). The second reason is the difficulty to delimitate economic units to include (users of the electricity). In the case of a tax on electricity generation, the problem had to be with delimitating the users of fossil fuels (as an input). This case is even a step beyond, which is determining the users of the product (electricity) produced with that input (fossil fuels). The link to emissions would be more indirect.

## Principles and criteria guiding technical decisions

The same principles determine the choice of leaving out implicit transfers and the choice of the AECR.

The proposed PEDS characteristics are in line with the principles covered in the code of practice (CoP) for the European Statistical System. Some of the most remarkable principles are: Comparability across countries; data accuracy (i.e. avoidance of bias); compatibility with the statistical framework, especially National Accounts, of which

environmental statistics are satellite accounts; cost effectiveness and non-excessive burden for the compilers; users relevance; and sound and coherent methodology. Arguably, in the first steps of a voluntary data collection, relaxation of some of those principles might be needed, for the sake of progressing in the matter. Nonetheless, in Eurostat's view, providing a solid methodological framework from the beginning is key to minimise issues during data reporting and minimise also possible revisions in the data series.

Not only the CoP principles have been considered. Flexibility is also relevant for the usability of the data. This is particularly reflected in the introduction of the AECR metric, which can be compared by the users to different benchmarks. Finally, even if with a reduced burden, PEDS compilation must provide value added compared to other projects (see details in Section 5).

### **3.2. Data sources**

#### **Data sources for ESA transfers related to fossil fuels**

Several data sources may be used for the identification and compilation of transfers provided by the government to support production and/or consumption of fossil fuels. They can be grouped as follows, which can (and possibly must) be complementary:

##### Supply side (perspective of the provider of the funds)

The national accounts databases and government budget documents are the main data source recommended by these guidelines. This includes tables of the ESA transmission programme, underlying data for national accounts government accounts, budget analysis, etc.

The most exhaustive data source might be budget documentation. At the European level, publicity and transparency of government expenditure and programmes is covered under a large number of regulations and agreements. Thus, information on the budget and transactions carried out by general government must be readily available and at a great level of detail. It is precisely, the level of detail of this data source, which becomes a difficulty. However, this problem can be overcome through the complementary data from other sources described below. In any case, an analysis of budget lines is advised to be taken as a starting point for the detection of these transfers. Budget analysis enables as well to cross-check transfers identified through other data sources. General government at national level is usually involved in this kind of transfers to support fossil fuels and analysing their data is the simplest first step to start with. Nonetheless, analysis of budget lines of regional authorities is also advised, especially for the countries with a more de-centralised structure.

The ESA transmission programme Table 11 'Government expenditure by function' is one of the most relevant statistics compiled in the domain of government accounts. Being under the ESA transmission programme, it ensures consistency and a solid basis



for comparison across countries. Indeed, it is a well-known database for compilers of other environmental statistics, such as ESST and EPEA. Nonetheless, its utility might be smaller in PEDS: there are no specific functions or sub-functions in government statistics for fossil fuel transfers. The information reported in the 'Catalogue of measures' may help with the identification of such government functions.

Other national accounts data could be useful, such as supply tables (ESA 10, table 15) and use tables (ESA 10 table 16). Both tables could help for the allocation of the transfers.

#### Demand side (perspective of the recipients of the transfers)

The first data source is the Structural Business Statistics (SBS). SBS cover a large variety of variables for almost all corporations and NACE producers (with some noticeable exceptions as Agriculture). Subsidies are one of the variables. The best would be securing access to the micro data used for the compilation, having details of the specific producer receiving the subsidy. The provider of the transfers and details of the purposes can also be available at micro level. If detailed data are not available, aggregated data can be used to establish a top reference of activities that are more likely to receive fossil fuel subsidies, i.e. NACE B, mining and quarrying; C19, Manufacture of coke and refined petroleum products; D, Electricity, gas, steam and air conditioning supply; G, Wholesale and retail trade; repair of motor vehicles and motorcycles; H, Transportation and storage. Producers classified under those activities are participating in the production cycle of fossil fuels. Regarding households, it is less likely to find data on transfers to households supporting fossil fuel consumption. The main data sources for households is the Household Budget Survey (HBS). One should check the national HBS for statistics on transfers. The HBS data is submitted to Eurostat every five years, although Member States might have developed further and more frequent data releases and with different breakdown,

Secondly, the fossil fuel sector tends to be concentrated in a limited number of companies. Usually, the concentration in the sector is not only horizontal (few companies in the same area of the production chain), but sometimes vertical as well (companies involved in different parts of the production chain). This makes possible an individualised contact with them and *ad hoc* analysis of the annual accounting documentation, annual reports for stakeholders, etc. Fossil fuel subsidies might be located in this way.

Thirdly, newspapers, press media, specialised publications, environmental advocating groups, etc. may provide data on fossil fuels transfers and prices.

Finally, the work carried out by DG ENV, which is mentioned below (and with more detail in Annex 1)

#### **Data sources for ESA transfers-other PEDS**

Projects focused on transfers supporting production and/or consumption of goods and services that are potentially damaging for other areas of the environment different from



fossil fuels are less abundant and developed. As a consequence or as a cause, data sources for them are scarce.

However, recently, DG ENV has led the way in this field with the development of the EHS inventory. See details in Annex 1. The inventory identifies support measures relevant for PEDS for all member states of the European Union. The support measures refer to both fossil fuels and other areas of the environment.

The objective of the inventories is to fulfil specific policy-making agreements and therefore list the whole possible universe of support measures. Altogether, not every single measure identified in the inventories may be included automatically in the PEDS scope.

In this sense, these guidelines recommends using this inventory to take stock of potential measures, and then to assess them under the criteria described in particular in section 3.1. Eurostat, with the experienced gained through data reporting aims to provide further guidance on this topic.

### Box 7. EHS list limitations and general guidance on border cases

The work carried out by the European Commission, DG ENV, is available on the web. Nonetheless, the first limitation for its usage for PEDS compilation is that, apart from some emblematic cases, the complete inventory is available under specific demand. A second important limitation is that most of subsidies are in the form of tax refunds, tax credits, reduced VAT rates and other kind of implicit transfers that are not part of PEDS scope, as defined in these guidelines. Finally, there is an important degree of uncertainty or ‘grey cases’ when deciding the inclusion of some of the concepts, especially in Agriculture.

The following general guidance to delimitate if subsidies identified in the inventory <sup>(11)</sup> are suitable for PEDS compilation:

- By convention, whenever a subsidy is linked to ESST, in order to keep the general coherence of the framework presented in section 2, **it should not be considered as other PEDS**. This refers specifically to electric vehicles, organic farming, etc. (products whose subsidies under certain circumstances are considered harmful in this study)
- All areas of the environment must be considered in order to make coherent decisions, regarding the valuation of the ‘counterfactual’ (See [2] - section 2.1.3). The counterfactual criterion could lead to the inclusion of subsidies related to meat production. According to this criterion, this would be the case if the situation without that subsidy would be less damaging for the environment as a whole, i.e. collateral effects associated to the substitution of meat would be low. If these collateral effects are too large, the conclusion can be different. These guidelines indicate that, if the counterfactual criterion is chosen (other criteria may be acceptable, See Annex 3), then it must be applied to all decisions made on the inclusion of the subsidies. For instance, concerning subsidies to nuclear energy generation, although the intuition might be its automatic

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<sup>(11)</sup> One can restrict the use of the inventory to measures declared as ‘direct subsidies’

inclusion, the evaluation must be also using the same criterion. In this case, one needs to assess the impact of not having the subsidy and evaluate what would be the alternative energy sources substituting nuclear. The conclusion might be that these effects are low (typical case of a country with high presence of renewables) or high (a country with large use of fossil fuels for energy generation), but the important point is that the decision is made under the application of the same criterion.

- In order to keep aligned with the criteria established for fossil fuel transfers, preserving then the possibility of summing up both, similar criteria must be followed. Particularly, when some other products and related activities are to be considered as other PEDS, subsidies supporting, in general terms, producers that use this product (even if it is done intensively) should not be included. Only when the subsidy is specifically devoted to the purchase/use of the product.

**Body theme colour bold (you can also put some coloured text inside)**

DG ENV website: [https://environment.ec.europa.eu/economy-and-finance/phasing-out-environmentally-harmful-subsidies\\_en](https://environment.ec.europa.eu/economy-and-finance/phasing-out-environmentally-harmful-subsidies_en)

### **Data sources for the average effective carbon rates**

The AECR is a ratio. The data source for the numerator is ETEA and for the denominator is AEA.

Both numerator and denominator are subsets of larger and existing datasets. The use of these sources avoid additional burden, since these data are mandatory existing statistics.

Data sources mentioned above might need to be complemented, but in any case by the same data sources used for their normal estimations processes. For instance, see Box 3, where the use of micro data of the national inventories is possible in order to generate a ratio that serves for the estimation of the part of the ETS payments to be included. Another example is the analysis of budget lines and contact with Ministries of Finance that allows determining if a particular tax (of those included in ETEA) fulfils the requirements stated out in section 3.1 for its inclusion.

#### 4. EUROSTAT PEDS QUESTIONNAIRE: STRUCTURE AND REPORTING GUIDANCE

This chapter presents the structure of the Eurostat questionnaire, basic indications about the reporting tables (details within the questionnaire itself) and some useful clarifications.

The questionnaire is structured in three tabs containing data, of which only two are to be reported by the countries, with an additional tab named ‘Catalogue of measures’. Usual tabs present in other Eurostat’s environmental accounts data collection are complementing the PEDS data tabs: Cover, Index, Basic instructions, Metadata, Methodology, Validation rules <sup>(12)</sup> and Logs (results of the pre-validation checks).

In the three data tabs, years to be reported will be from  $t$ , to  $t-3$ <sup>(13)</sup>, being  $t$  the reference period. Years will appear in columns. In rows, the questionnaire distinguishes two institutional sectors: households and corporations (further breakdown by NACE, at level A\*10)<sup>(14)</sup>. Non-profit institution serving households (NPISH) (S15), general government (S13) and rest of the world (S2) are not included as recipients of fossil fuel transfers or tax payers and CO<sub>2</sub> emitters. The role of the general government in the questionnaire differs from the PEDS-ESA transfers to the AECR. In PEDS-ESA transfers, general government appears as the only sector paying transfers, whereas for the AECR indicator, general government is the only recipient of the taxes paid by the other two institutional sectors (households and corporations).

The first tab contains data *PEDS-ESA transfers* (See figure 2a, 2b and 2c). Data are split in three tables corresponding to ESA-transfers for: 1. fossil fuels, 2. Other PEDS, and 3. the sum of both fossil fuels and other PEDS. The sum will be automatically calculated. Therefore, compilers are asked to fill the first and second table, with the values estimated according to the indications provided in section 3.

Total PEDS as the sum of fossil fuel transfers and other PEDS is automatically compiled in the questionnaire, when the aggregation is possible. Since, other PEDS are likely to be unknown for several of the cells shown in the questionnaire, total PEDS is expected to be unavailable in most cases.

Specific details about the reporting practices and the difference between zero and not available will be explained in “basic instructions” tab.

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<sup>(12)</sup> Eurostat will further develop the content of Validation rules after analysing the first submissions and aim at presenting them to the MESA WG meeting in May 2023.

<sup>(13)</sup> Reporting previous years are advised and positively assessed by Eurostat, but it should be to the extent that it is comparable with the rest of the data series, e.g. data beyond in the introduction of the ETS make no sense.

<sup>(14)</sup> In PEDS-ESA transfer tab, corporations and households are ‘institutional sectors’ (S11/12 and S14) as in ESA-2010, while in ‘input for AECR’ and ‘AECR’, households are solely final consumers, as they are covered in the data sources AEA and ETEA. Subsequently, corporations being equal to the sum of NACEs in PEDS-ESA transfers is a deliberate choice; being households not breakdown by NACE (its appearance as producers in this context is negligible). In the case of AECR, households and other institutional sectors that are producers, are assimilated to quasi-corporations and are part of the NACE allocation. Under the households category, households remain as ‘final consumers’ only. Taxes and emissions associated to the final consumption activities by other institutional sectors (namely, general government and NPISH) are assimilated to their activities as producers, i.e. within the respective NACE, where they are considered quasi-corporations.

**Figure 2a. Fossil fuels ESA-transfers in tab ‘PEDS-ESA’**

<b>Fossil fuels</b> ESA transfers related to fossil fuels paid to institutional sectors (In millions national currency)	<b>2018</b>	Standard footnote	Confidentiality footnote	Explanatory footnote	<b>2019</b>	Standard footnote	Confidentiality footnote	Explanatory footnote	<b>2020</b>	Standard footnote	Confidentiality footnote	Explanatory footnote	<b>2021</b>	Standard footnote	Confidentiality footnote	Explanatory footnote
Total Subsidies on Fossil Fuels paid (Corporations + households)																
Paid to households (Institutional sector as ESA-2010)																
Paid to corporations (Total NACE)																
Paid to NACE A Agriculture, forestry and fishing																
Paid to NACE B Mining and quarrying;																
Paid to NACE C Manufacturing																
Paid to NACE D Electricity, gas, steam and air conditioning supply																
Paid to NACE E Water supply, sewerage, waste management and remediation activities																
Paid to NACE F Construction																
Paid to NACE G Wholesale and retail trade; repair of motor vehicles and motorcycles																
Paid to NACE H Transportation and storage																
Paid to NACE I-U Services (except wholesale and retail trade, transportation and storage)																
Transfers not elsewhere classified																

**Figure 2b. Other PEDS transfers in tab ‘PEDS-ESA’**

<b>Other PEDS</b> ESA transfers other than fossil fuels paid to institutional sectors (In millions national currency)	2018	Standard footnote	Confidentiality footnote	Explanatory footnote	2019	Standard footnote	Confidentiality footnote	Explanatory footnote	2020	Standard footnote	Confidentiality footnote	Explanatory footnote	2021	Standard footnote	Confidentiality footnote	Explanatory footnote
Total Subsidies on Fossil Fuels paid (Corporations + households)																
Paid to households (Institutional sector as ESA-2010)																
Paid to corporations (Total NACE)																
Paid to NACE A Agriculture, forestry and fishing																
Paid to NACE B Mining and quarrying;																
Paid to NACE C Manufacturing																
Paid to NACE D Electricity, gas, steam and air conditioning supply																
Paid to NACE E Water supply, sewerage, waste management and remediation activities																
Paid to NACE F Construction																
Paid to NACE G Wholesale and retail trade; repair of motor vehicles and motorcycles																
Paid to NACE H Transportation and storage																
Paid to NACE I-U Services (except wholesale and retail trade, transportation and storage)																
Transfers not elsewhere classified																

**Figure 2c. Total PEDS transfers in ‘PEDS-ESA’**

<b>TOTAL PEDS</b> ESA transfers related to fossil fuels + other transfers paid to institutional sectors (In millions national currency)	<b>2018</b>	Standard footnote	Confidentiality footnote	Explanatory footnote	<b>2019</b>	Standard footnote	Confidentiality footnote	Explanatory footnote	<b>2020</b>	Standard footnote	Confidentiality footnote	Explanatory footnote	<b>2021</b>	Standard footnote	Confidentiality footnote	Explanatory footnote
Total Subsidies on Fossil Fuels paid (Corporations + households)																
Paid to households (Institutional sector as ESA-2010)																
Paid to corporations (Total NACE)																
Paid to NACE A Agriculture, forestry and fishing																
Paid to NACE B Mining and quarrying;																
Paid to NACE C Manufacturing																
Paid to NACE D Electricity, gas, steam and air conditioning supply																
Paid to NACE E Water supply, sewerage, waste management and remediation activities																
Paid to NACE F Construction																
Paid to NACE G Wholesale and retail trade; repair of motor vehicles and motorcycles																
Paid to NACE H Transportation and storage																
Paid to NACE I-U Services (except wholesale and retail trade, transportation and storage)																
Transfers not elsewhere classified																

The second tab contains data related to *Input for AEER-range*. Compilers are asked to fill in two tables, one for the taxes selected for the AEER and the second one with the CO<sub>2</sub> emissions, selected from ETEA and AEA, respectively.

**Figure 3a. Taxes selected for the estimation of the AEER indicator**

Taxes imposed to fossil fuel combustion by institutional sector, in million national currency	2018	Standard footnote	Confidentiality footnote	Explanatory footnote	2019	Standard footnote	Confidentiality footnote	Explanatory footnote	2020	Standard footnote	Confidentiality footnote	Explanatory footnote	2021	Standard footnote	Confidentiality footnote	Explanatory footnote
TOTAL taxes paid (Corporations + households)																
Households as final consumers																
Corporations (Total NACE)																
NACE A Agriculture, forestry and fishing																
NACE B Mining and quarrying																
NACE C Manufacturing																
NACE D Electricity, gas, steam and air conditioning supply																
NACE E Water supply, sewerage, waste management and remediation activities																
NACE F Construction																
NACE G Wholesale and retail trade; repair of motor vehicles and motorcycles																
NACE H Transportation and storage																
NACE I-U Services (except wholesale and retail trade, transportation and storage)																
Not elsewhere classified																

**Figure 3b Emissions selected for the estimation of the AECR indicator**

CO <sub>2</sub> emissions originated from fossil fuel combustion by institutional sectors, in thousand tonnes of CO <sub>2</sub> equivalents	2018	Standard footnote	Confidentiality footnote	Explanatory footnote	2019	Standard footnote	Confidentiality footnote	Explanatory footnote	2020	Standard footnote	Confidentiality footnote	Explanatory footnote	2021	Standard footnote	Confidentiality footnote	Explanatory footnote
TOTAL CO <sub>2</sub> (Corporations + households)																
Households as final consumers																
Corporations (Total NACE)																
NACE A Agriculture, forestry and fishing																
NACE B Mining and quarrying																
NACE C Manufacturing																
NACE D Electricity, gas, steam and air conditioning supply																
NACE E Water supply, sewerage, waste management and remediation activities																
NACE F Construction																
NACE G Wholesale and retail trade; repair of motor vehicles and motorcycles																
NACE H Transportation and storage																
NACE I-U Services (except wholesale and retail trade, transportation and storage)																
Not elsewhere classified																



The third tab, *ECR – range*, will be automatically calculated from the data in the previous tabs. It contains two tables. The first one, will show the AECR indicator, while the second one will show the percentage of emissions in each cell. This is the basis for graphs and charts, which present visually what is the AECR for the different NACE producers and households and the percentage of emissions to which they refer. This allows also to incorporate benchmarks and rapidly observe, ordering data from smaller to larger, emissions and the imposed price and how they fall below or above it.

**Figure 4a. AECR indicator**

Average ECR and emission range by institutional sector, in national currency per tonne	2018	Standard footnote	Confidentiality footnote	Explanatory footnote	2019	Standard footnote	Confidentiality footnote	Explanatory footnote	2020	Standard footnote	Confidentiality footnote	Explanatory footnote	2021	Standard footnote	Confidentiality footnote	Explanatory footnote
Average (Corporations + households)																
Households as final consumers																
Corporations																
NACE A Agriculture, forestry and fishing																
NACE B Mining and quarrying;																
NACE C Manufacturing																
NACE D Electricity, gas, steam and air conditioning supply																
NACE E Water supply, sewerage, waste management and remediation activities																
NACE F Construction																
NACE G Wholesale and retail trade; repair of motor vehicles and motorcycles																
NACE H Transportation and storage																
NACE I-U Services (except wholesale and retail trade, transportation and storage)																
Not elsewhere classified																

**Figure 4b, Percentage of CO<sub>2</sub> emissions associated to the previous AECR values**

Percentage of total CO <sub>2</sub> emissions by institutional sector	2018	Standard footnote	Confidentiality footnote	Explanatory footnote	2019	Standard footnote	Confidentiality footnote	Explanatory footnote	2020	Standard footnote	Confidentiality footnote	Explanatory footnote	2021	Standard footnote	Confidentiality footnote	Explanatory footnote
(= 100%)																
Households as final consumers																
Corporations																
NACE A Agriculture, forestry and fishing																
NACE B Mining and quarrying;																
NACE C Manufacturing																
NACE D Electricity, gas, steam and air conditioning supply																
NACE E Water supply, sewerage, waste management and remediation activities																
NACE F Construction																
NACE G Wholesale and retail trade; repair of motor vehicles and motorcycles																
NACE H Transportation and storage																
NACE I-U Services (except wholesale and retail trade, transportation and storage)																
Not elsewhere classified																

The last data tab relates to the catalogue of measures. This tab might be considered as a hybrid between data reporting and provision of information as in metadata tab. There are several specific objectives with the introduction of this tab:

- Provision of technical details, such as shares for the allocations of transfers, which are beyond the usual content of metadata information, and it is extremely useful for data validation and gaining experience on the transfers to be reported, in order to streamline methodology and guidance in the future;
- Specific information of each sub-content of the estimation about the data sources, especially in the case of PEDS-ESA transfer, and more particularly, for other PEDS, where guidance material is less advanced;
- The specific structure of the catalogue measures also allows reporting transfers (and taxes in the case of the AECR) which are identified, but not included in the current questionnaire's data tab. Similarly, this will enrich next discussions in working groups and other forums. Within the not included concepts, one can report information of implicit transfers identified by the countries, including explanations on the estimation method applied. This information will determine future inclusion of these transfers in the PEDS data collectio

**Figure 5. Catalogue of measures, Table 1 Reported ESA transfers-Explicit transfers**

<b>1. Reported ESA TRANSFERS - Explicit transfers</b>									
Description of the ESA explicit transfers	National accounts distributive transactions (ex D3x, D7x, D9x)	Beneficiary of the transfer (Households, or NACE activity)	Category (Fossil fuels/ other PEDS)	Time period (year)	Total value of the transfer	Program comments	Program life span (ex 2016-2020)	Data source	Comments
Investment grant to promote discovery and exploitation of new oilfields	D92	NACE B (30%), NACE I-U (30%), NACE F (40%)	FF	2018	200,000,000.00		2017-2018	National government budget Company A and B annual accounts	Only two companies have received those funds. As they are large companies they are subject to provide anyak information. One is building the infrastructure (NACE F). The other one is extracting the oil and making the research in a similar proportion (NACE B and M)

**Figure 6. Catalogue of measures, Table 2 Average effective carbon rate (AECR) – reported taxes.**

<b>2. Average effective carbon rate (AECR) - reported taxes</b>								
Description of the tax included in the AECR	Specific carbon taxes or similar (Yes/No)	Excise tax on fossil fuel and similar (Yes/No)	ETS payments (Yes/No)	Other type (please specify)	Time period	Total value of the tax	Availability by	Comments
CO <sub>2</sub> specific tax on mineral oils	yes	no	no		Annual basis	800,000,000.00	Institutional sector and NACE (for corporations)	

**Figure 7. Catalogue of measures, Table 3 Average effective carbon rate (AECR) – potential reporting.**

<b>3. Average effective carbon rate (AECR) - potential reporting</b>				
Description of the tax you could include in the AECR	Time period	Total value of the tax	Availability per	Comments
Excise tax on electricity	Annual basis	1,000,000,000.00	Institutional sector and NACE (for corporations)	

**Figure 8. Catalogue of measures, Table 4 Implicit transfers available for reporting.**

<b>4. Implicit transfers available for reporting</b>								
Description of the implicit transfer	National accounts transactions code (if any)	Beneficiary	Time period	Total value of the transfer	Program comments	Program life span	Data sources	Comment
Tax abatement on kerosene in Aviation	D.21	Companies operating to and from islands xxx to the continent - NACE H	Annual	25,000,000.00	Two companies offering this service and benefiting from this tax abatement	since 1990	Ministry of Finance	Estimated through the Revenue Foregone Method, i.e. applying the differential tax rate to the current tax base (not behavioral change incorporated)

Finally, PEDS questionnaire includes an additional empty tab for countries willing to report data on implicit transfers. Since, this is not officially part of the PEDS data collection, the format is free. Eurostat will evaluate way forward based on the information and data transmitted by countries related to implicit transfers.

## **List of Acronyms**

AEA: Air Emissions Accounts

AECR: Average Effective Carbon Rates

CoP: Code of Practices withing the European Statistical System

CRF: Common Reporting Format

DG CLIMA: Directorate-General Climate Action

DG ENER: Directorate-General Energy

DG ENV: Directorate-General Environment

ECR: Effective Carbon Rates

EGSS: Environmental Goods and Services Sector

EEA: European Environment Agency

EHS: Environmental Harmful Subsidies

EPEA: Environmental Protection Expenditure Accounts

ESA-2010: European System of Accounts 2010

ESST: Environmental Subsidies and Similar Transfers

ETEA: Environmental Taxes by Economic Activities

ETS: Emissions Trade System

GHG: Greenhouse gases

HBS: Household Budget Surveys

MESA WG: Monetary Environmental Statistics and Accounts Working Group

NACE: Statistical classification of economic activities in the European Community <sup>(15)</sup>

NPISH: non-profit institution serving households

OECD: Organisation for Economic Co-operation and Development

PEDS: Potentially Environmentally Damaging Subsidies

SBS: Structural Business Statistics

UNEP: United Nations Environment Programme

UNFCCC: United Nations Convention for Climate Change

WTO: World Trade Organization

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<sup>(15)</sup> NACE is the acronym for “Nomenclature statistique des activités économiques dans la Communauté européenne”



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