125 years
Statistics
Netherlands

How to define climate change mitigation related transactions in government finance statistics?

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Statistics Netherlands

Why?

- How much public money is spent on ‘net zero policies’?
  (cf. DGI-3 Recommendations, Netherlands Court of Audit)
- Adaptation could be a next step…

What?

Mitigation related government:

- *expenditure* such as subsidies, income and capital transfers
- *income* such as taxes and fines
- *financial support* such as government participations in green funds or direct investments in activities contributing to the energy transition.

Context:
taxes (*stick*) versus subsidies (*carrot*)

- Make politicians look good
- Require public money
- Beneficiaries will become dependent

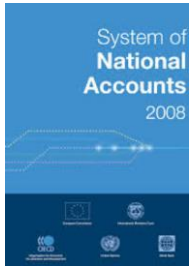
- Make politicians look bad
- Acquire public money
- Governments will become dependent

How?

Important building blocks:

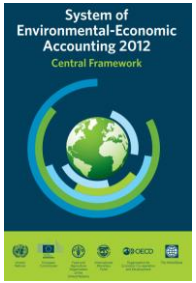
→ 2008 SNA:

- Defines government
- Defines the required transaction categories
- Provides government expenditure by functions



→ SEEA-CF:

- Provides functional classifications for environmental protection and resource management expenditure, CEPA and CreMA
- Defines environmental taxes including those related to climate change mitigation

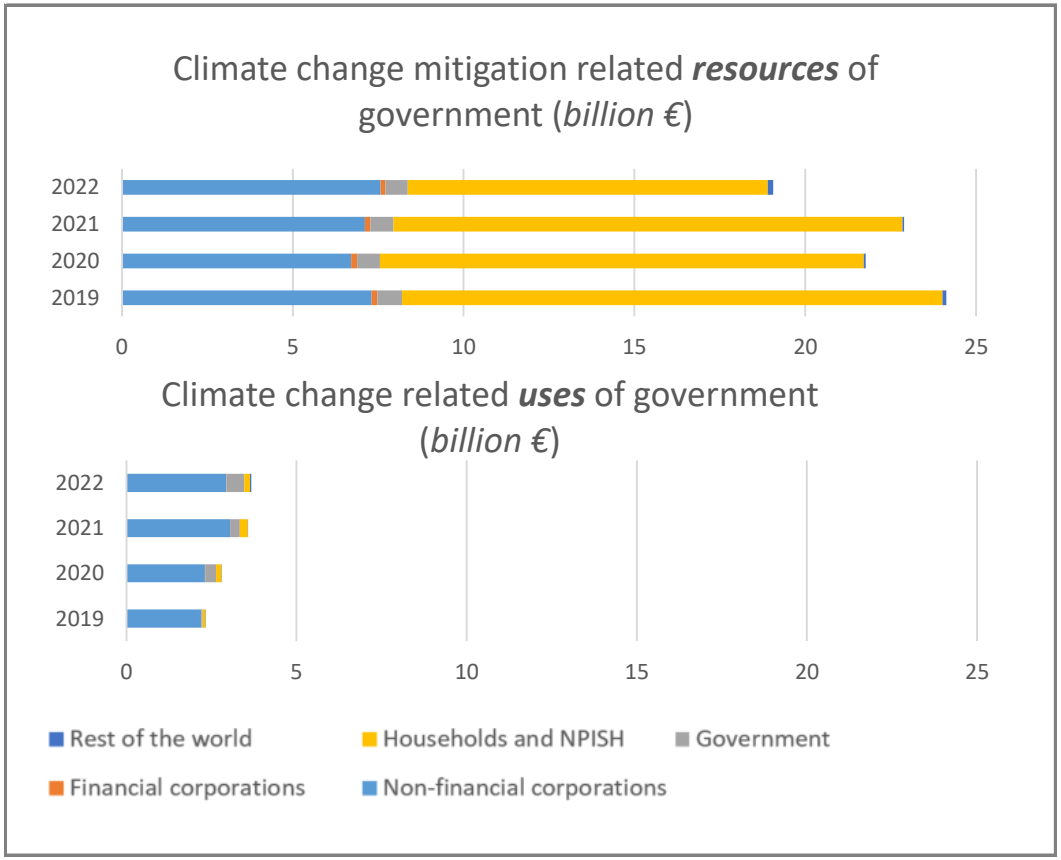


What could a climate change mitigation account of the government sector look like?

	Variable	Explanation
1	Instrument	Labels and article numbers have been copied as observed in policy documentation and files.
2	Government body	This may be a ministry or any other government body.
3	Sector	The corresponding ESA (sub)sector code of this government body will be added.
4	Counter sector	The counter sector indicates the counterparty (corporations, financial institutions, government, households) of a policy measure. This variable indicates e.g. who receives a subsidy and who pays the tax.
5	Resources / Uses	This boolean variable makes the distinction between resources (receipts) and uses (outlays) as well as assets versus liabilities.
6	Year	The reference year to which the information refers to.
7	Amounts in money terms	Indicates the amount of money involved.

In other words, the climate change mitigation account is nothing more than a cross-section of the already existing government sector account.

Tentative results for the Netherlands



These tentative results show that in the case of the Netherlands:

- the stick is much bigger than the carrot
- the carrot is mostly provided to corporations and hardly to households.

…a closer look at the size of sticks follows soon…

Conceptual challenges: (I) how to allign the existing functional classifications?

The 10 major COFOG functions (SNA):

1. General public services
2. Defence
3. Public order and safety
4. Economic affairs
5. Environmental protection
6. Housing and community amenities
7. Health
8. Recreation, culture and religion
9. Education
10. Social protection

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Environmental protection or resource management as a *primary purpose* (SEEA, 4.12):

Is not going to lead to significant amounts of climate change mitigation related expenditure

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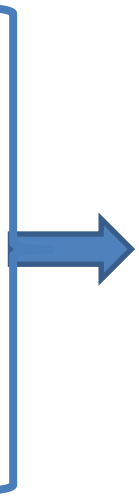


Environmental protection or resource management as *adapted 'policies'* in analogy with adapted products (SEEA, 4.67):

- Non-fossil electricity production
- Electric modes of transport
- Hydrogen applications in industry
- Energy saving measures for housing and buildings
- Etc..

Borderlines cases:

Buying out cattle farmers: nitrogen and methane reduction

Supporting the expansion of electricity distribution networks

Promoting the use of bicycles

Conceptual challenges: (II) how to define climate change mitigation related taxes

- This issue is closely related to the so-called effective carbon rates (ECRs) which explicate the amount of taxes imposed on one kiloton of greenhouse gas emissions (*cf*. OECD, Eurostat is developing a data collection methodology).

$$ECR = \frac{taxes\ on\ fossil\ fuel\ use\ and\ on\ greenhouse\ gas\ emissions}{greenhouse\ gas\ emissions}$$

- But also relates to discussions on so-called fossil fuel subsidies which often take the form of tax exemptions or tax discounts.

Conceptual challenges: (II) how to define climate change mitigation related taxes

According to Eurostat the ***tax base*** defines an environmental tax. So its purpose or earmark is irrelevant.

Climate change mitigation related taxes is a subset of environmental taxes.

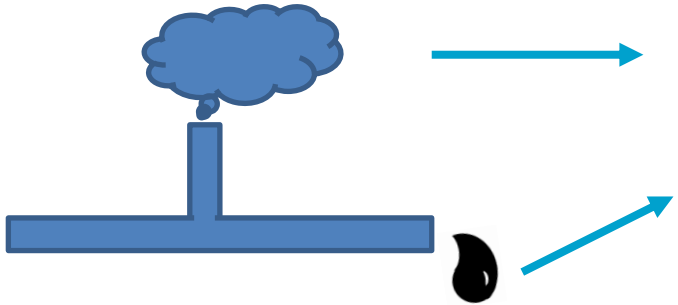
Clearcut cases:

- carbon taxes
- ETS related taxes
- (fossil) energy taxes
- excise taxes on gas and car fuel

Debatable cases:

- motor car taxes
- value added tax (2x)
- Excise taxes on electricity

Conceptual challenges: (II) how to define climate change mitigation related taxes



To put it simply, the taxes in the denominator of an ECR are restricted to those on fossil energy fuels and related CO2 emissions.

But there are a few issues about subsidies:

- In the EU ETS substantial parts of permits are still granted for free: should these count as a tax discount?
- Tax credits…

Conceptual challenges: (II) how to define climate change mitigation related taxes

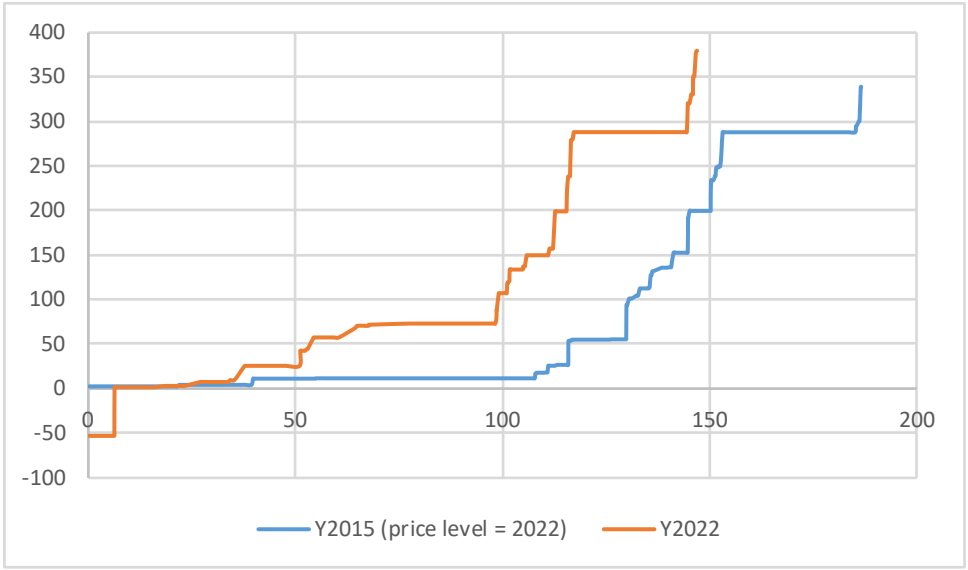
Some thoughts on the scope of greenhouse gas emissions:

- Recording on a ***territory*** basis (IPCC)
- Recording on ***residency*** basis (SEEA)

Data on payable taxes (on products and production) obtained from the national accounts supply-use tables follow the same industrial classification (ISIC, NACE) as the SEEA emissions accounts. When analyzing differences in ECRs within in an economy and its economic activities a national accounts based approach may have benefits.

An example: effective carbon rates in the Netherlands

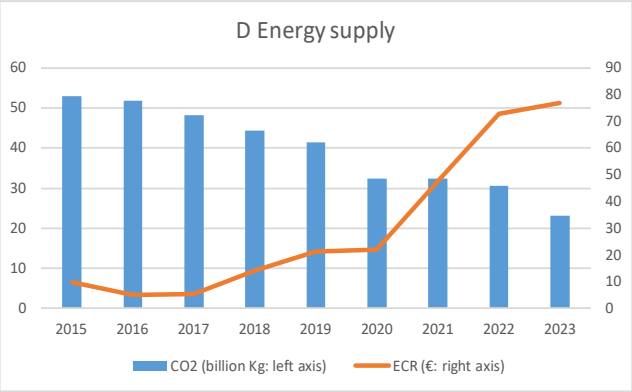
Differences in ECRs between the various industries and households in the Dutch economy

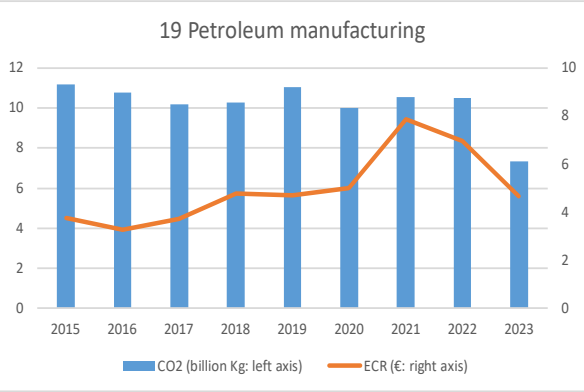


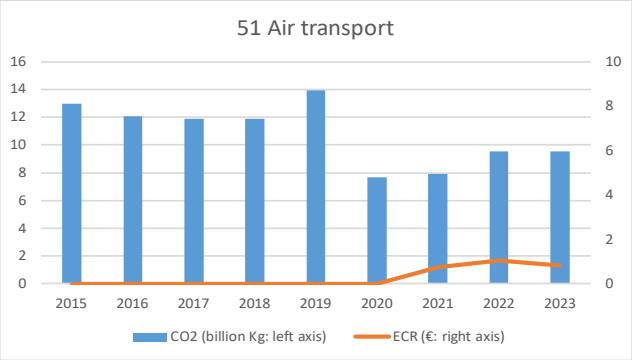
x-axis:
billion kg of CO2 (cumulative)

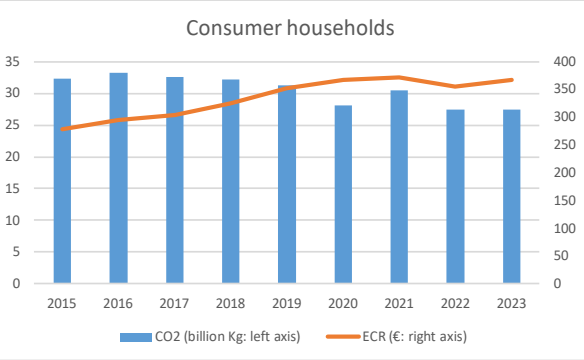
y-axis:
ECRs in euros (price level 2022) per ton of CO2 which are ranked in size

A few examples of individual industries









Data issues (the Dutch case)

Statistical information of the central (state, non-profit institutions) is of reasonable good quality and often quite detailed.

However, for local governments (provinces, municipalities, water bodies) the information availability is insufficient, exception being the ‘specific transfers’ from the state to local governments

To conclude

- The material in this presentation is preliminary and has not (yet) been published.
- Results will be subject to change when published.
- The climate change mitigation account of the Dutch government is still incomplete, particularly data on expenditure of local governments is still missing.

I have two wishes for the upcoming SEEA update:

- Provide stronger guidance on how the functional classifications of SEEA interlink with other functional classifications such as COFOG.
- Have a close look at environmental taxes and in particular ETS. The 2025 SNA guidance seems second best when the objective is to calculate ECRs at industry level.

Many thanks for your attention!

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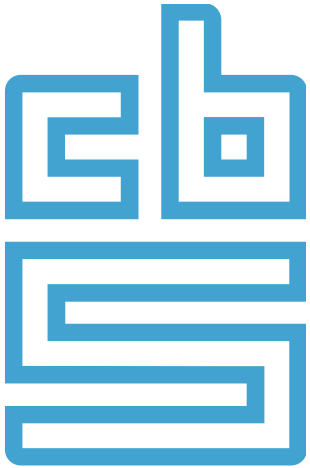

Facts that matter