Statistiska centralbyrån Statistics Sweden

SEEA Research agenda

Identifying fossil fuel transactions for SDG reporting

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London group issue Climate change

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A) Methodological issue

New data is requested under the SDG goal 12 – to monitor the amount of fossil fuel subsidies paid by government to society. The SEEA CF has the capacity to inform on this indicator.

B) Status

The possibility of measuring ‘Potentially environmentally damaging subsidies’ is referred to in the SEEA CF (§4.147). It mentions that some definitions include implicit (or indirect) subsidies, such as preferential tax rates.

Agenda 2030 Goal 12

Statistiska centralbyrån Statistics Sweden

Indicator 12.c.1: “Amount of fossil fuel subsidies per unit of GDP”. UN Environment is custodian for the indicator. International subsidy data available from collections of IEA, OECD, World Bank, IMF

A task force of NSI:s are now sharing experiences and testing methods, assessing whether such data may be able to be compiled via SEEA.

Report will be written - we focus on SEEA but use the Agenda reporting as a driving force. Countries will need to know what to report anyway and it is good to have the statistical offices knowledge then.

Country studies available

- The countries in the Task Force are Canada, Germany, Ireland, Italy, Kyrgyzstan, New Zealand and Sweden.
- We have also had exchanges with Eurostat and OECD on methodology.

SEEA fossil fuel /GHG transfers

1. On-budget transfers: from the state to industry (as SNA subsidy definition), but also including transfers to international beneficiaries, households as well as capital transfers (investment grants)
2. Tax abatements: can be estimated with extra data on energy taxes paid by industry, combined with energy use or carbon dioxide emissions by industry. With national excise tax, energy taxes, carbon taxes, ETS as a basis. Possibly compared to an international price reference.
3. Other Greenhouse gas emissions by industry from SEEA can also be added.

Core issues

- The possibility to find national data sources on economic transactions (direct and indirect), energy use and climate gas emissions.
- The methods and good practices of using national and international reference values for the calculation of indirect transactions that can make international comparisons possible.
- The possibilities of showing the transactions by industry. What level of detail is possible?

Country assessment

1. Use the taxation rules and the direct transfers to fossil fuels from tax authorities or finance ministry.
2. Apply those rules on the energy statistics to obtain an estimate of the direct and indirect transactions to fossil fuels. OECD have a yearly report with Effective Carbon Rates by country.
3. Divide the national statistics by industry.
4. To broaden the analysis, look at what other greenhouse gas emissions the accounts can provide and add other economic instruments.
5. Analyze the data and the lessons learned and communicate them.

Results

- Data availability for energy and emissions is good
- Data availability for fossil fuel transactions are good but more variation of national systems
- SEEA can broaden the analysis by including other climate gases than CO2 and other economic instruments.
- A proposal is to make use of table 4.8 in the SEEA CF and adapt it to include tax abatements (implicit subsidies).

Table 4.8 in Central Framework

Table 4.8
Selected payments to and from government and similar transactions

		Payments received by				
		Government	Corporations	Households	NPISH[a]	Rest of the world
Payments made by	Government	Transfers between levels of government	Subsidies and investment grants	Current and capital transfers	Subsidies; current and capital transfers	Current and capital transfers
	Corporations	Taxes, fines, fees, charges and rent	Rent	Rent	Donations	Donations to NPISH in rest of the world
	Households	Taxes, fees, charges and fines			Donations	Donations
	NPISH[a]	Taxes	Current and capital transfers	Current and capital transfers		Current and capital transfers
	Rest of the world	Taxes and current transfers			Donations	

[a] Non-profit institutions serving households.

GHG emissions

- Fossil fuel emissions is what is being asked for in SDG follow up – results show that carbon taxation of fossil fuels vary substantially between fuel types and by industry.
- SEEA can also incorporate tax abatement for fossil fuels used in international transport.
- Other climate gases are possible to analyze with the SEEA, notably methane from agriculture.

Method to calculate Effective Carbon Rates (ECR)

- The ECR is the sum of three pricing components: specific taxes on fossil fuels, carbon taxes and prices of tradable emissions permits.
- All three components increase the price of high-carbon relative to low and zero carbon options, encouraging energy users to go for low carbon or zero carbon options.
- The carbon prizing gap is a measure of the difference between an actual ECR and a benchmark price which constitutes an estimate of the carbon environmental costs. A benchmark of 60 Euro is a low-point estimate for the costs in 2030 used by OECD, but we are discussing options.
- Using a common international benchmark makes the data comparable and is a valid comparison as the addition of carbon in the atmosphere is the same no matter from what country it is emitted. The more carbon is emitted into the atmosphere, the more the price will go up.

Suggestion for SEEA

- Report on GHG transactions in three categories
- 1) Direct transactions to fossil fuel production and consumption
- 2) Set up a table with ECR for fossil fuels by using OECD reference method. Petrol, diesel, coal, natural gas, fuel for international transports.
- 3) Add ECR calculations for other GHG emissions like methane emissions.
- Criteria for reference price: highest available, valuation studies of external costs, prices that can change fuel use? Still discussing.

Research agenda topic

- Is it clear what greenhouse gas emissions could be covered?
- Is it clear what transactions could be covered?
- Are there terminology improvements that you would want to recommend?
- What international reference price would you recommend if a carbon price gap should be calculated? 60 EUR/Tonnes of CO2 is a minimum price used in OECD calculations. However, higher prices are used in many countries.