

CONFERENCE ON CLIMATE CHANGE AND OFFICIAL STATISTICS
VII. BRINGING IT ALL TOGETHER. April 2008



Statistics Sweden

Statistiska centralbyrån

The climate challenge - implications for sectoral statistics

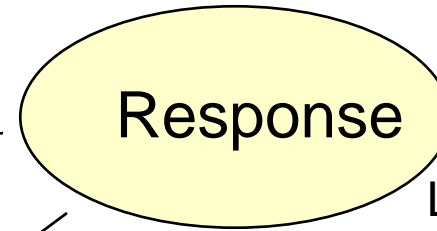
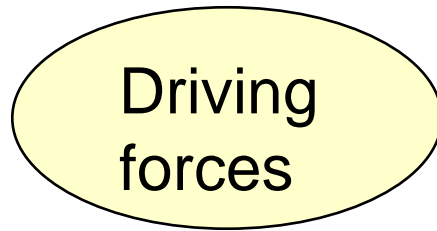
Viveka Palm and Nancy Steinbach, Statistics Sweden.
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In order to make good targets, policy and follow-up in the climate change area, there is a need for well integrated official statistics.

Here we outline some of the experiences of the integration of sectoral statistics in Sweden, and what challenges lies ahead.

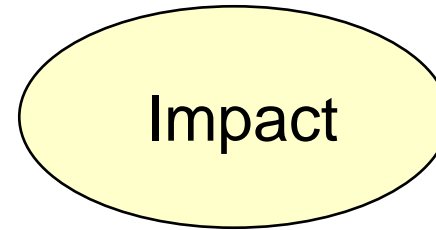
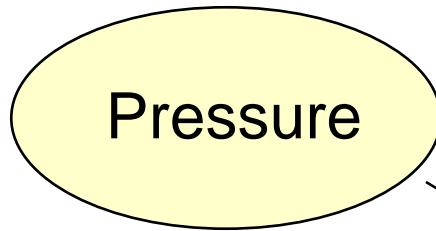
DPSIR-model. Data needs

Population
Energy use
Industry
Transport
Investments



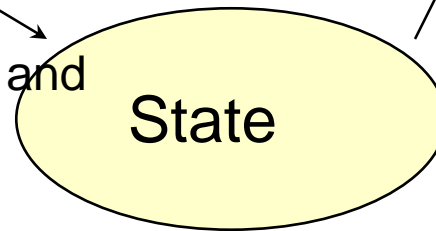
Laws
Taxes, subsidies
New technology

Emissions
Waste



Bad health, death
Threatened species
Econ.losses

Physical, chemical and
biological state
Air-, water- and
Land quality



Sectoral statistics



1. National accounts: taxes and subsidies
2. Environmental statistics: emissions, resources, land use
3. Energy statistics
4. Transport statistics
5. Agricultural statistics
6. Trade statistics
7. Household statistics

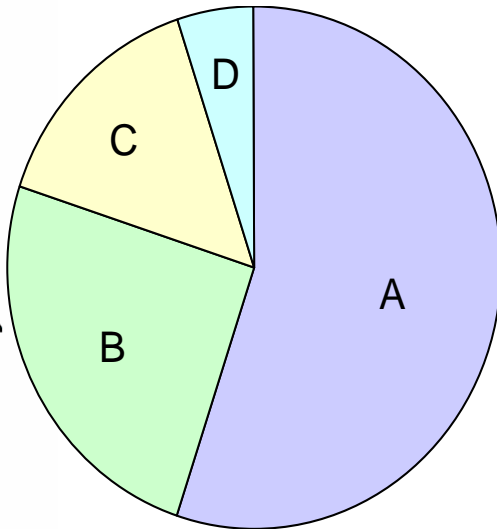
8. Company statistics, the business register
9. Government statistics: budget
10. Environmental protection expenditure and investments
11. Social statistics (employment, health, income)



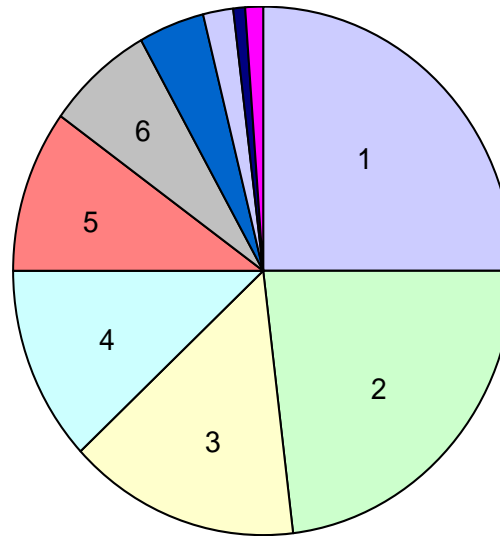
Sectors - Production - Consumption

Statistiska centralbyrån Statistics Sweden

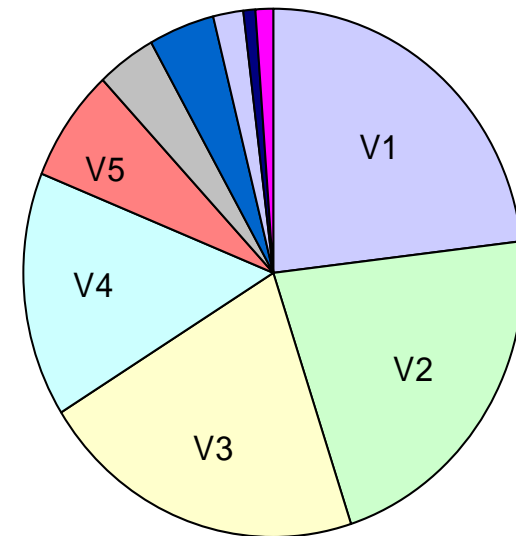
Sectors



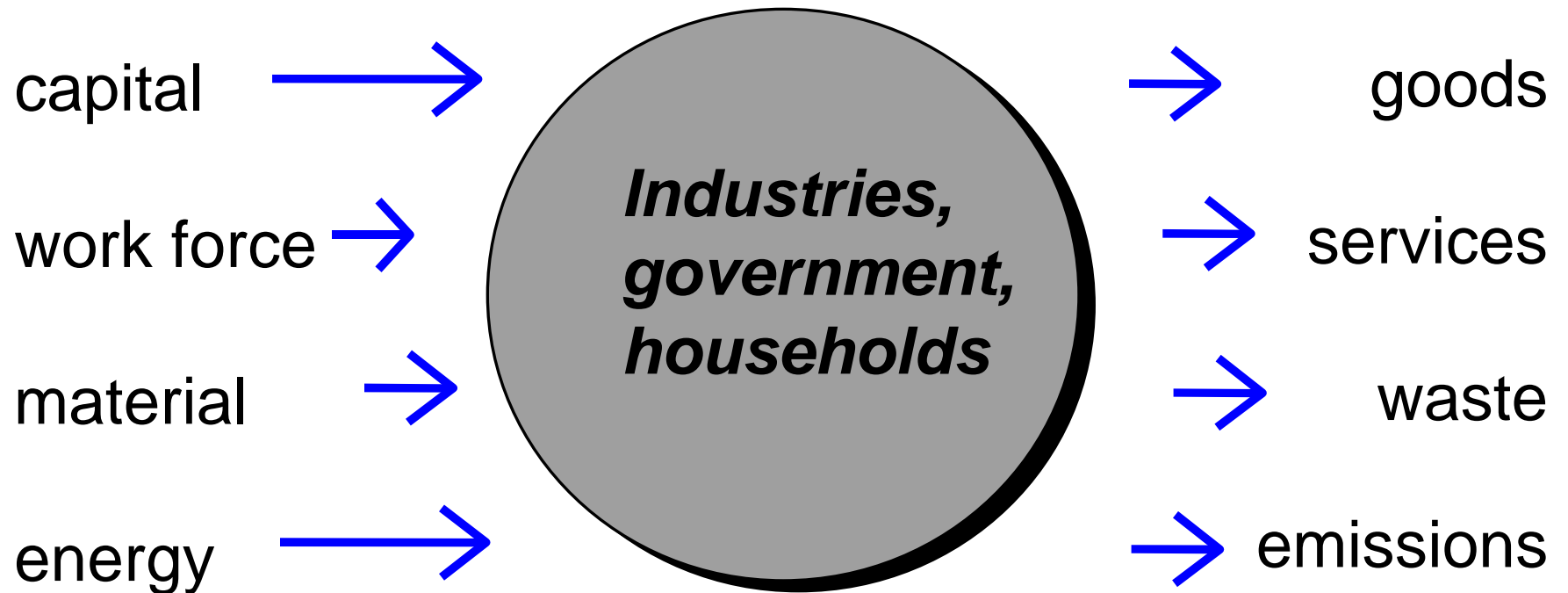
Industries/actors



Product/service

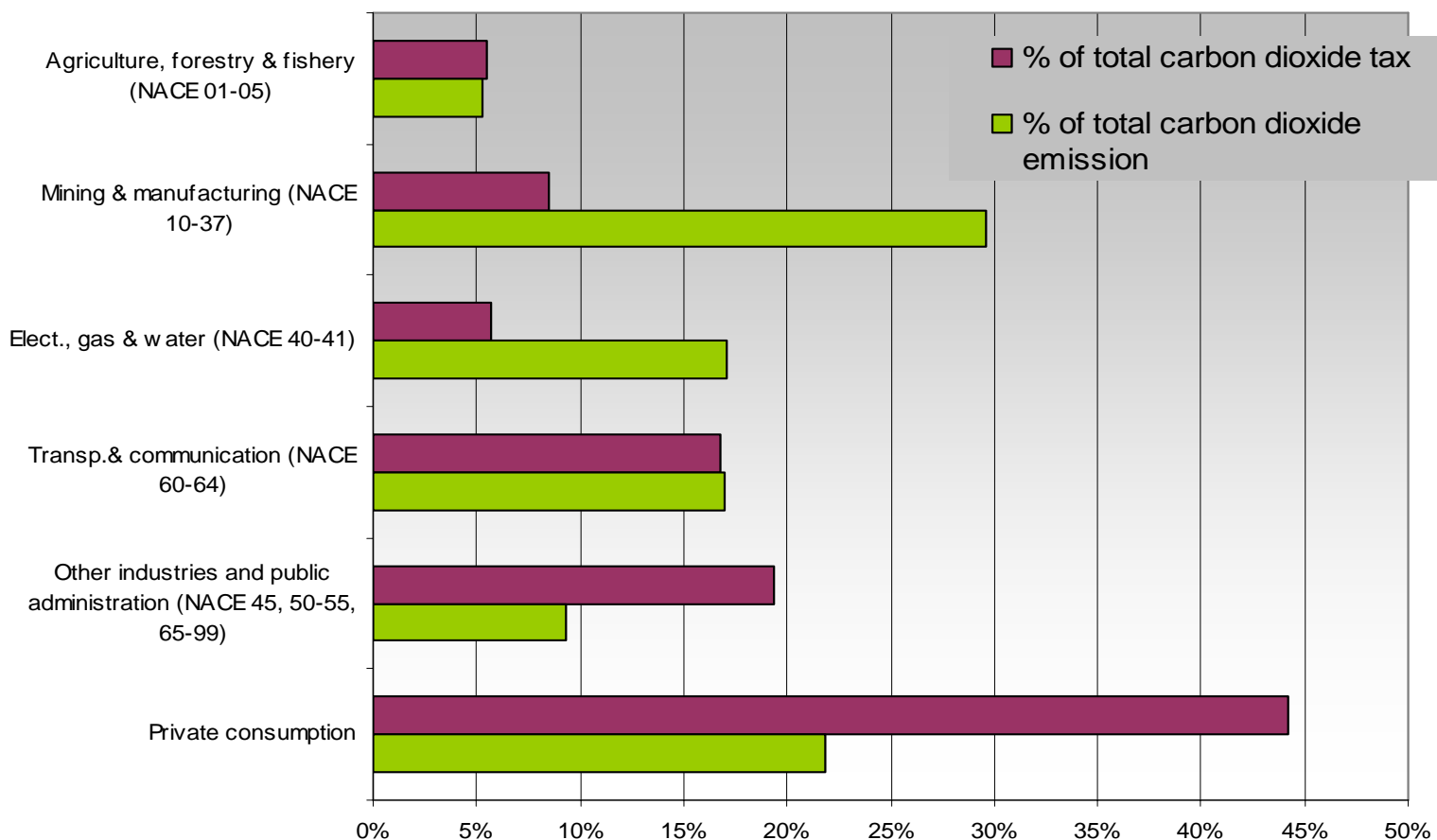


Integrated analyses





CO2 tax and CO2 emissions by industry





Regular publishing

- **Energy use per industry and final demand**
- **Emissions to air**
- **Environmental taxes and subsidies**
- **Environmental protection expenditure**
- **Environmental goods and services**



Environmental Accounts



Introduction

What is Environmental Accounts?

- ⊕ Selection of data series
- ⊕ Classifications
- PC-Axis

Environmental Accounts data

From the production side

By industry

From the Final Demand side

Domestic

Total

From Private Consumption

Domestic

Total

Simulating emissions

Background

Run the model

7 sectors

52 sectors

About the Application

Introduction

Welcome to the data and analysis site for the Swedish Environmental Accounts.

You can look at and download data on emissions, energy use etc as well as look at indicators, decoupling etc.

Under **Introduction** you can look at the types of emissions, energy and economic variables that are in the database as well as the NACE and COICOP classifications we use.

Under **Environmental Accounts data** you find the data presented either by industry or calculated by product group for Final Demand or Private Consumption using Input-Output analysis.

Under **Simulating emissions** you find a simple simulation model for looking at the links between Final Demand, production, energy intensities and emissions.

Under **About the Application** you find help and the version of the application, the texts and the database.

▶ [Environmental Accounts at Statistic Sweden website](#)





Climate relevant analyses

- Economic instruments: subsidies to green fuels, to fossil fuels, energy taxes, green tax reforms (changing tax from employment to energy)
- IO-analyses: decoupling & decomposition analysis
- Household and public consumption
- Environmental goods and services
- Modelling environment/economy



Internal and external drivers for finding the environmental edge on sectoral statistics

- Accounting + Environmental management policy. The departments are obliged to identify how data can be linked to environmental data demands from the user side.
- Government investigations, the need for data from authorities, research institutes and universities.



Users advisory group

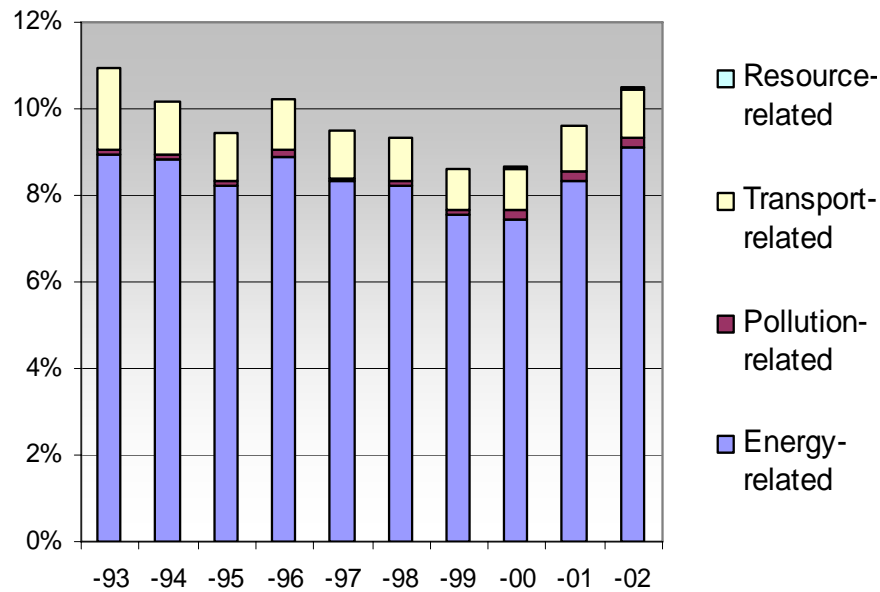
- The environmental accounts advisory group meet 2-4 times a year.
- It consists of people from the department of finance, department of industry and the department of environment, the Swedish EPA, chemicals authority, Swentec and research and NGOs
- Advice on future priorities from a user perspective, follow-up yearly work plans.

Environmental goods and services: Abatement opportunities

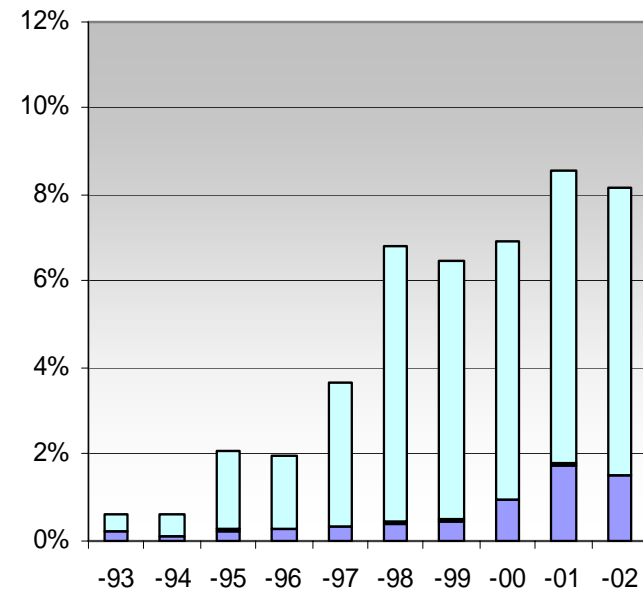
- World market for sustainable energy, i.e. solar power, wind power, hydro power, biogas, district heating, energy efficiency measures, estimated to 165 DEM or 800 billion SEK per year until 2015 (Source: VDEW, the German society for electricity production).
- Environment goods and services database founded on the business register.

Environmental taxes and subsidies – percent of total

Environmental taxes



Environmentally motivated subsidies





New developments: Energy subsidy types

- *Direct transfers (to producers, households)*
- *Public R&D*
- *Preferential tax treatments*

- *Loans*
- *Trade restrictions*
- *Price controls*
- *Infrastructure*

Source: Energy subsidies. Lessons learned in assessing their impact and designing policy reforms. UNEP 2004.

Four climate change and basic statistics challenges



1. Increase availability of data to analysts and modelers. Need for international cooperation. Free access to moderately aggregated data.
2. Engage more with users. Explanations of underlying factors. Knowledge about integrated analysis must be strengthened. Requires new types of expertise in staff. Increased quality through internal cooperation.
3. Include social effects into the dominating environmental economic perspective. Needs investigation.
4. Keep a good balance between the demand for detailed data and the protection of individual and company data.



Agenda for future action

- International transport is not covered in CO₂- protocol. Should be included in future international inventory of emissions.
- Energy taxes and subsidies – No regular reporting to the international bodies. SNA reporting and energy reporting. Could become a standard reporting item.
- Dialogue with users to assess data needs and analyses needs. A ‘new’ user group: the modelers of environmental -economic instruments
- Internal work: organization and harmonized classification across sectoral statistics.
- Human resources and financial resources to be found and allocated.
- Coordination of international actions to increase availability of data