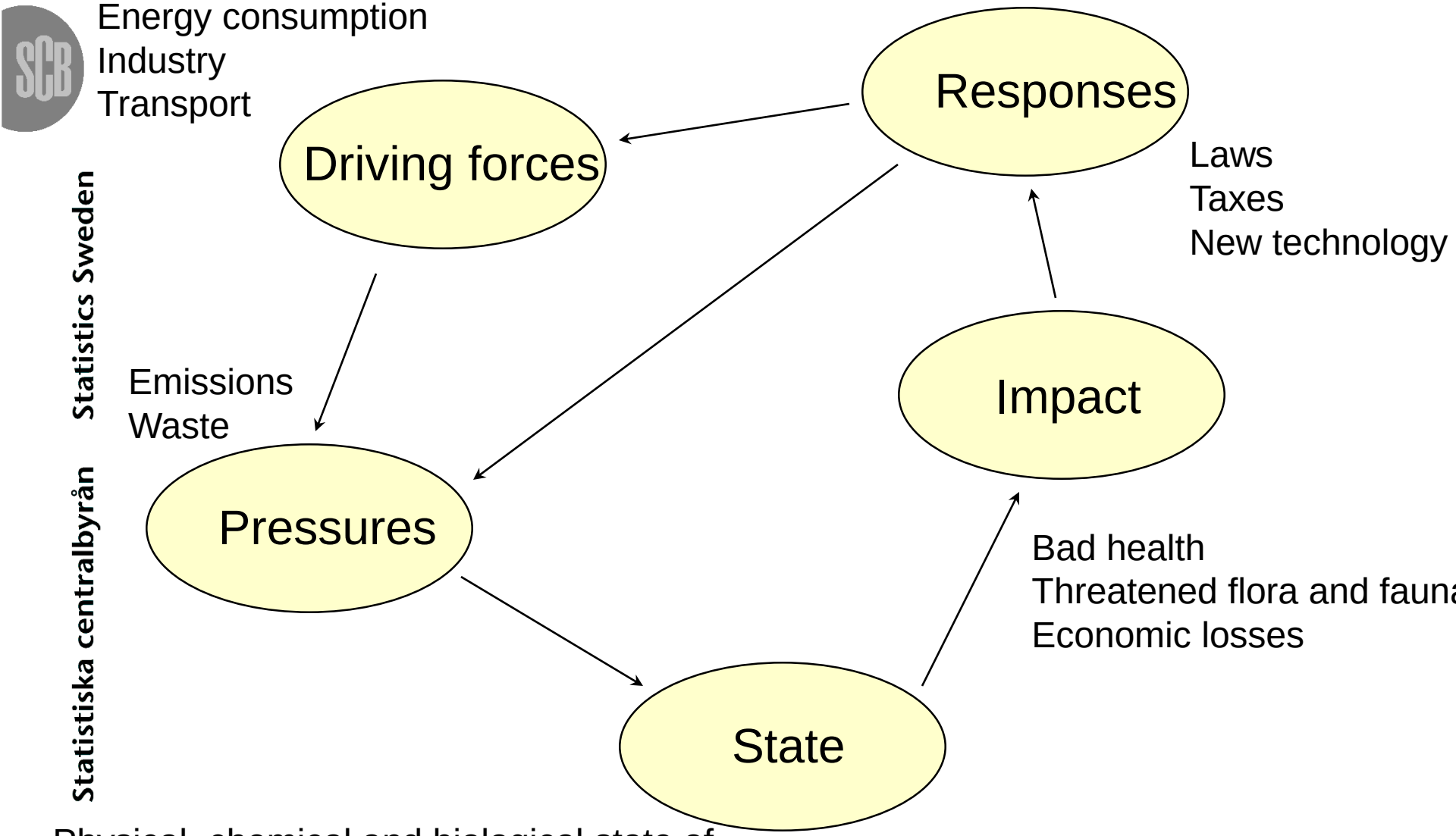
Environmental accounts and environmental statistics

Viveka Palm,
Statistics Sweden

Statistiska centralbyrån Statistics Sweden

DPSIR-model



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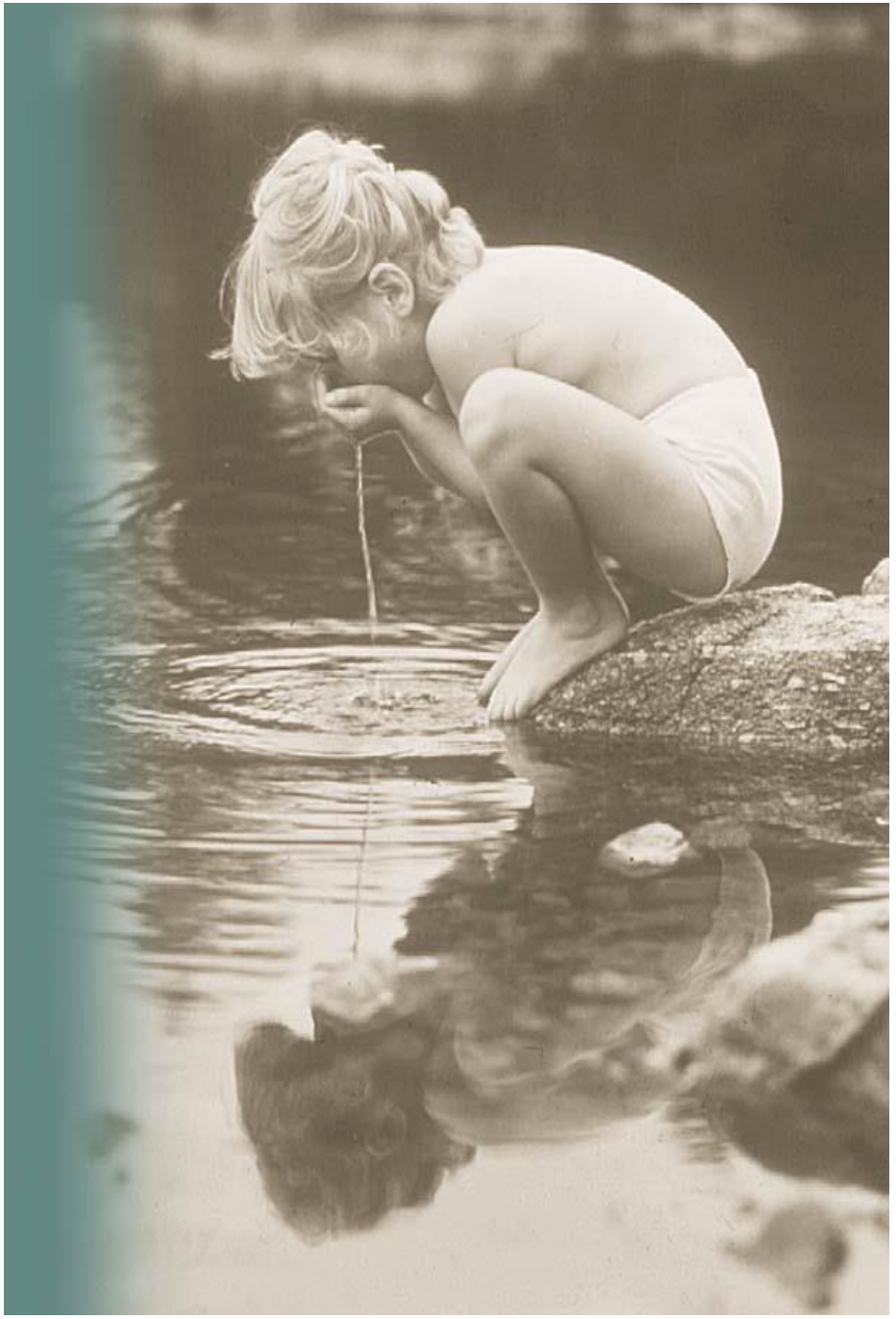
» The overall aim is to hand over to the next generation a society in which the major environmental problems have been solved.«

The Swedish Parliament (Riksdagen) 1999



Sweden´s Environmental Objectives

1 Reduced Climate Impact
2 Clean Air
3 Natural Acidification Only
4 A Non-Toxic Environment
5 A Protective Ozone Layer
6 A Safe Radiation Environment
7 Zero Eutrophication
8 Flourishing Lakes and Streams
9 Good-Quality Groundwater
10 A Balanced Marine Environment, Flourishing Coastal Areas and Archipelagos
11 Thriving Wetlands
12 Sustainable Forests
13 A Varied Agricultural Landscape
14 A Magnificent Mountain Landscape
15 A Good Built Environment
16 A Rich Diversity of Plant and Animal Life

Indicators used for evaluation

Mapping environmental data in Sweden

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Why

Keeping track:

- Who is producing the data
- What is the content
- Who is using it today

Future needs:

- Are there gaps in the information chain
- Is new statistics needed
- How to assure co-ordination

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Project 1:

Mapping of official environmental statistics according to directive 2001:100

Project 2:

Mapping of other related environmental statistics and information, including natural resources

Environmental statistics

- ✓ Emissions → EPA
- ✓ Environmental accounts, including env. protection expenditure → SCB
- ✓ Fertilizers and lime → SCB
- ✓ Environmental Code fees → EPA
- ✓ Land use → SCB
- ✓ Sales and use of chemicals → KEMI
- ✓ State of the environment → EPA
- ✓ Waste → EPA
- ✓ Water use → SCB

Legal framework

Legal framework for environmental information:

- *Official Statistics Act 2001:99*. Promulgated on 15 March 2001.
- *Official Statistics Ordinance 2001:100* . Promulgated on 15 March 2001.
- *The Official Secrets Act 1980:100*

Responsible authorities for environment statistics

EPA

State of the environment
- Number of oil spills in Swedish sea areas
- Metals in fish
- Share of sea eagles with successful hatching

- Sulphur dioxide in air
- Nitrogen dioxides in air

Emissions
- Load of phosphorous to the coast
- Load of nitrogen to the coast
- Discharges to water and sewage sludge production

- Emissions of climate changing gases (CO2 equivalent
- Emissions of sulphur dioxides
- Emissions of nitrogen oxides
- Emissions of ammonia
- Emissions of NMVOC

Waste
- Official statistics on waste

Monitoring of Environmental law
- Environmental sanction charges

Swedish Chemical Agency

Chemicals, sales and use
- Flow analyses of chemical substances
- Overview of chemicals (not official statistics)
- Sold quantities of pesticides
- Hazardous chemicals
- Pesticides in Swedish agriculture. Number of doses

SCB

Fertilizers and lime
- Use of fertilizers and animal manure and cultivation measures in agriculture
- Nitrogen and phosphorus balances in arable land and agricultural sector in Swe
- Sales of lime for agricultural and horticultural purposes, for lakes and woodland
- Sales of fertilizers for agricultural and horticultural purposes

Land use
- Concentrations of workplaces outside localities
- Smaller localities
- Localities; areas, population

- Living and changes in living in weekend and holiday homes and in one-building
- Development in protected coastal zones
- Concentrations of weekend and holiday homes

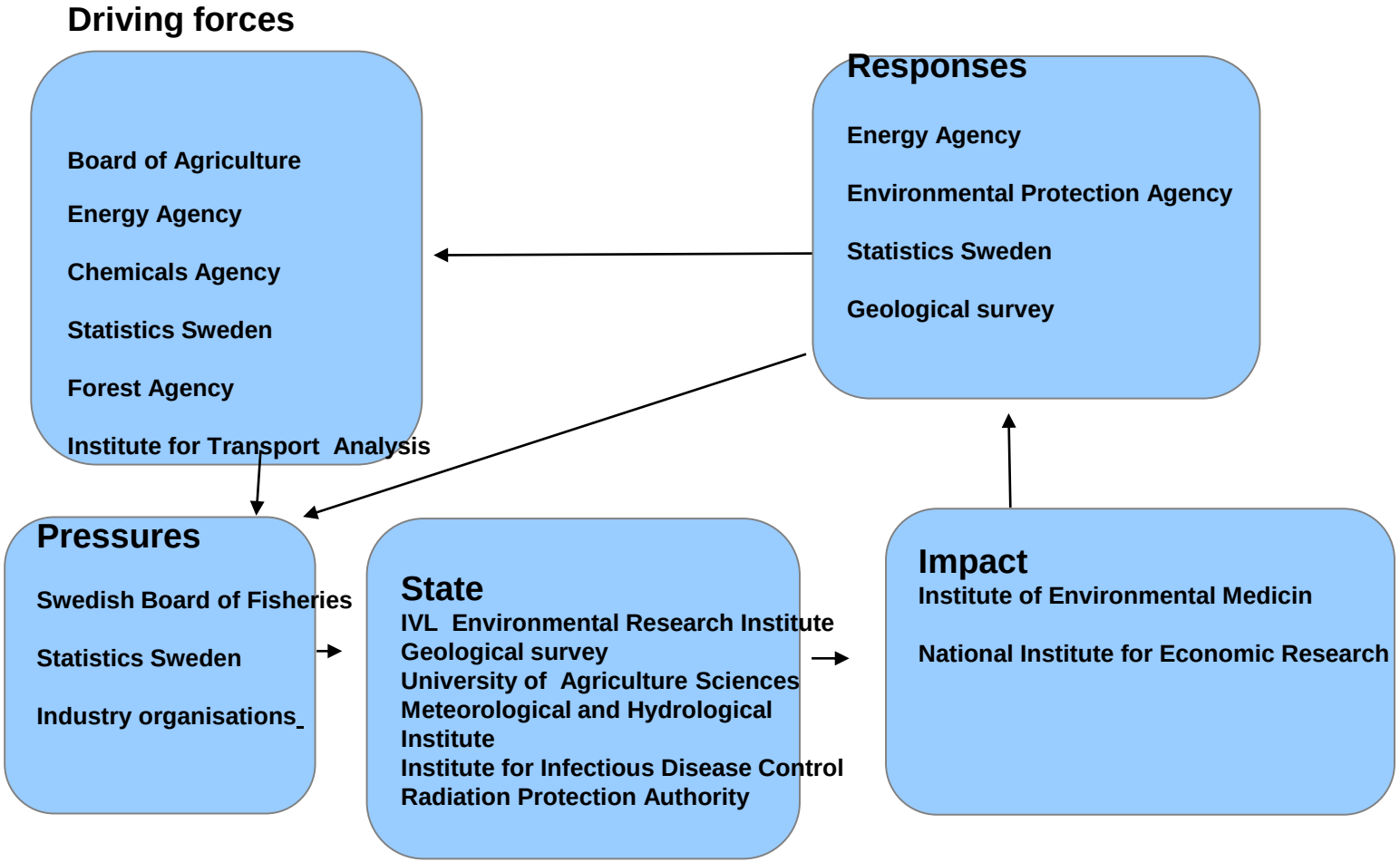
- Green areas within and in the vicinity of urban settlements
- Land use in localities and changes of land use
- Land use in Sweden
- Land cover by municipality

- Protected nature
- Coast, shores and islands in Sweden
- Peat; production, use, environmental impact
- Land and water areas

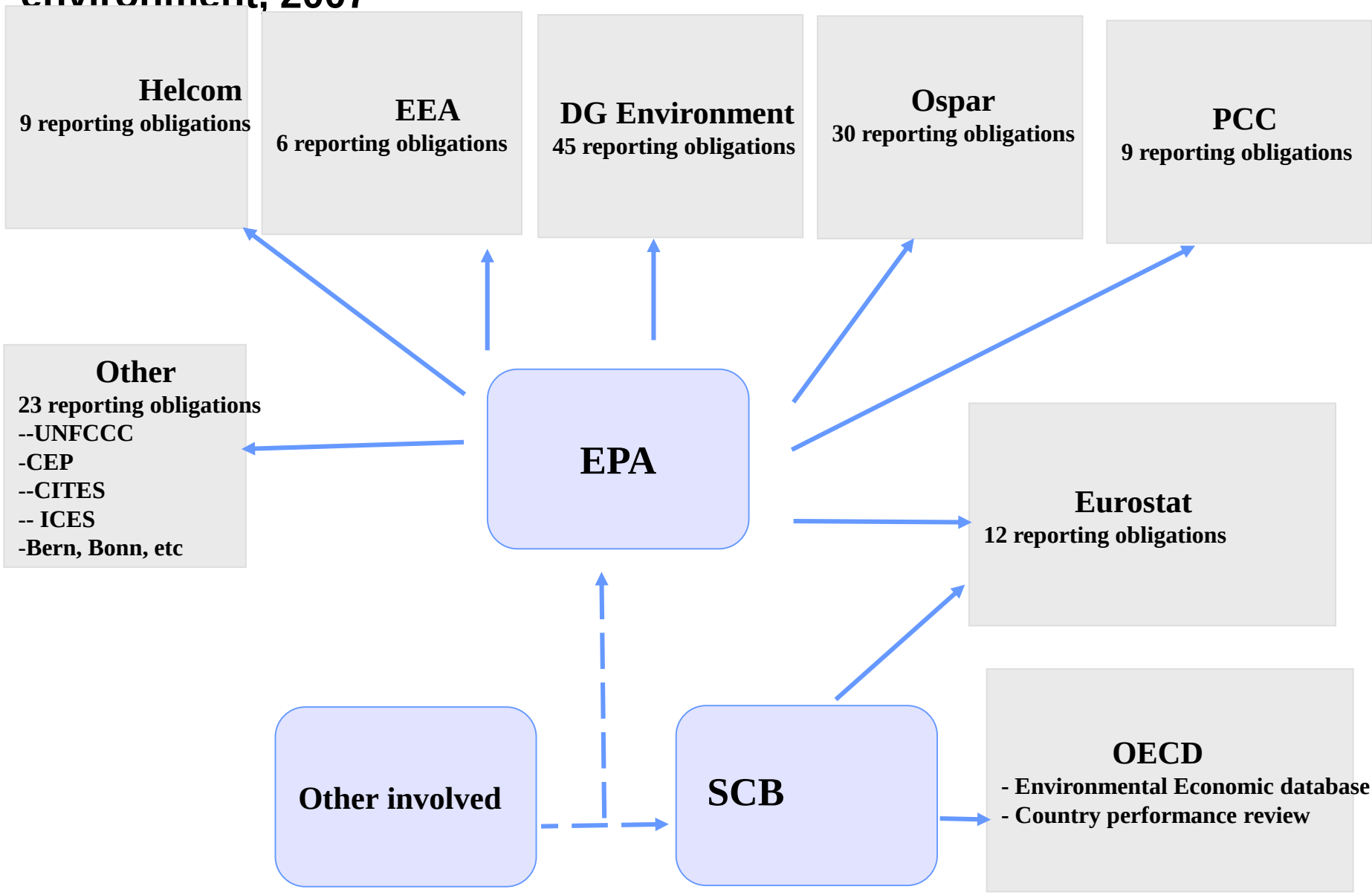
Environmental accounts and sustainable development
- Environmental accounts
- Environmental protection expenditure
- Indicators for sustainable development (Not official statistics)

Water use
- Water withdrawal and water use in Sweden
- Industrial water use in Sweden

DPSIR-model: many environmental data producers



International reporting obligations within environment, 2007



Statistics Sweden's organization in the area of environment

Statistiska centralbyrån Statistics Sweden

- Unit for Environment and tourism
- Unit for Environmental Accounts and Natural Resources
- using data from the unit of energy and transport as well as the agricultural unit, the national accounts and the business register

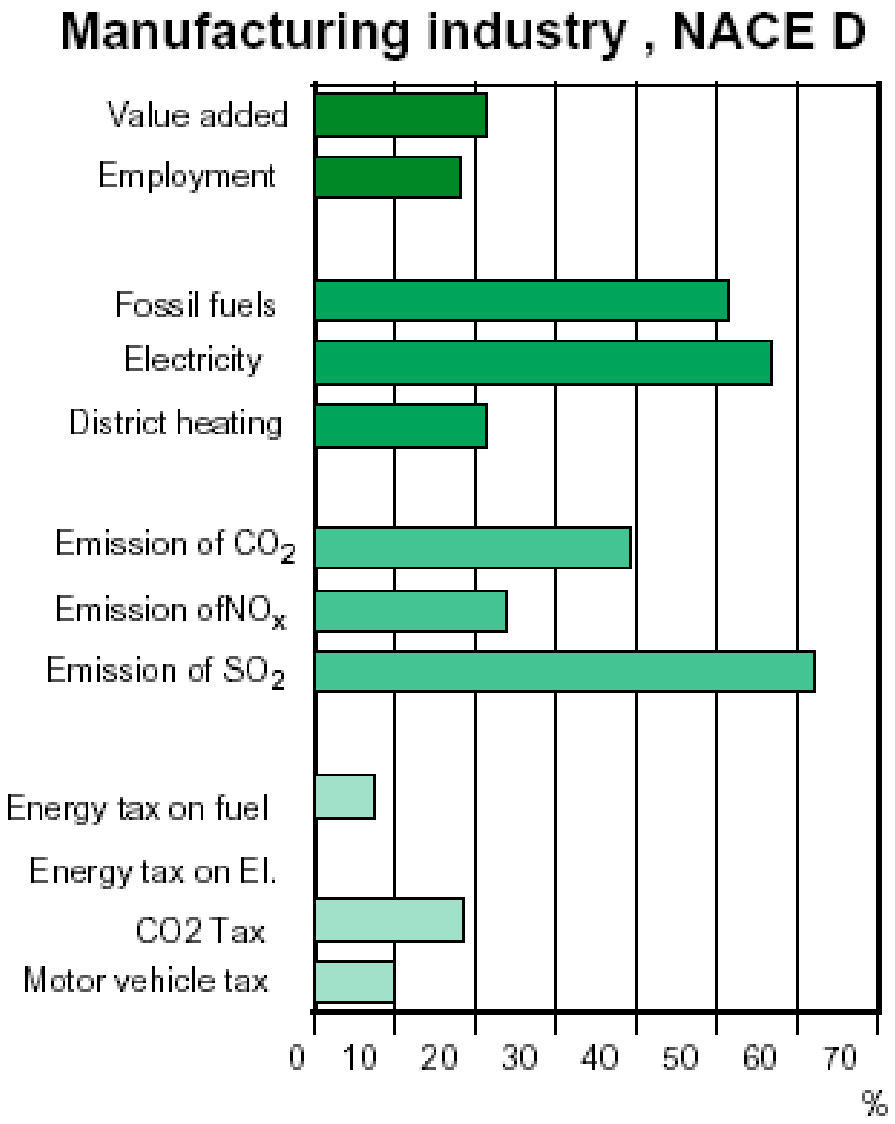
The System of integrated Environmental and Economic Accounts (SEEA)

- **A satellite system to the economic accounts**
- **Development since 1990**
- **International cooperation, UN-based**
- **Eurostat harmonises and collects Europes data.**

Three components of SEEA

- **Flows of materials per industry (energy, material, emissions, waste)**
- **Economic variables (labour, taxes, subsidies, costs, products and services)**
- **Natural resources (stocks, quality, value)**

Economic-environmental profile



Statistics Sweden's activities within the area of environment

- Produce official statistics
- Produce non-official statistics
- On commission produce official statistics for other agencies being responsible for official statistics
- On commission produce other types of environmental statistics
- Participate in international collaboration
  - Eurostat
  - OECD
  - UN

WEB-sites

Statistics Sweden: www.scb.se

Environmental accounts web tool:

www.mirdata.scb.se

Environmental objectives:

www.miljomal.nu

Swedish EPA: www.naturvardsverket.se

Leasons learned

Need for an overview

To make data more available

To make harmonisation possible

Time lags compared to other statistics

Conclusions

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1. Environmental Statistics is built step by step
2. Cooperation is needed
3. Statistical offices have advantages when describing driving forces, pressures and responses
4. For state of the env, other expertice is neccessary