PRINCE - Policy relevant indicators for national consumption and environment good to follow up SDG goal 12

2015-2018

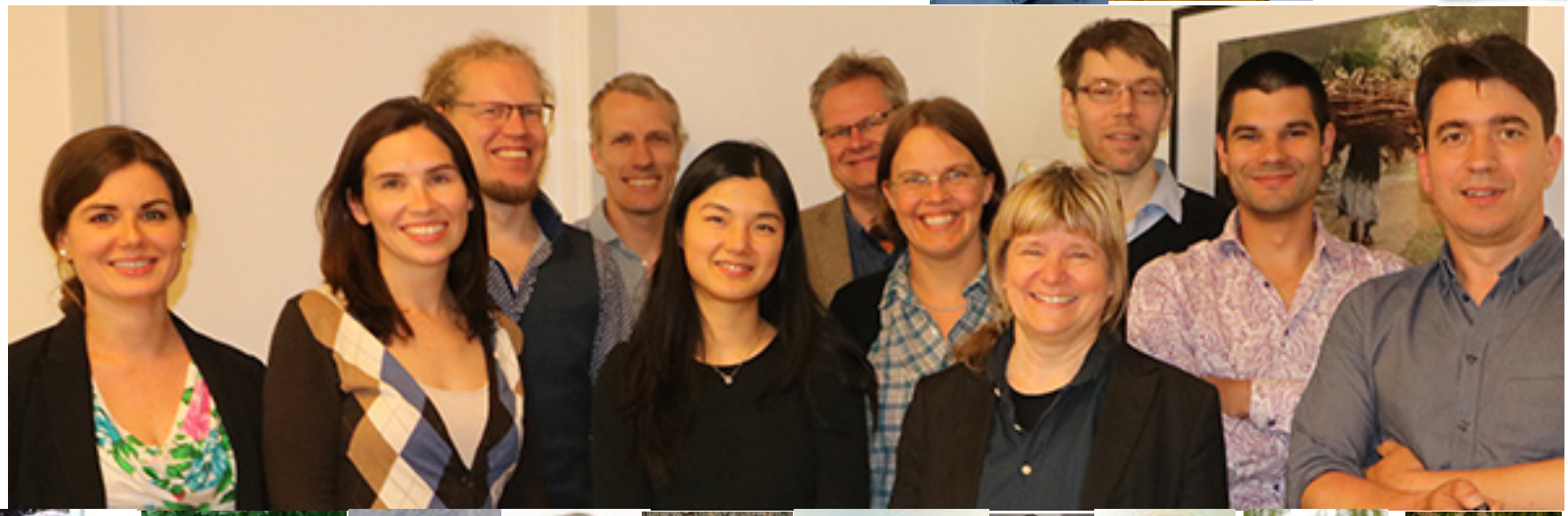
EPA and SWAM research funding

SCB, SEI, Chalmers, KTH, NTNU, CML & TNO

Main objective in research call

- Quantify environmental pressure from Swedish consumption, both in Sweden and abroad.
- The Generational Goal aim: to hand over to the next generation a society in which the major environmental problems in Sweden have been solved, without increasing environmental and health problems outside Sweden's borders.

The dream team



Choosing an input output model for future consumtion indicators

- We have used a single region IO-model with modelled climate emissions earlier.
- Now several multi regional input output (MRIO) models are available from researchers
- Sources of variation between models
  - Macro economic input data
  - Model construction and data processing
  - Environmental input data: number of extensions

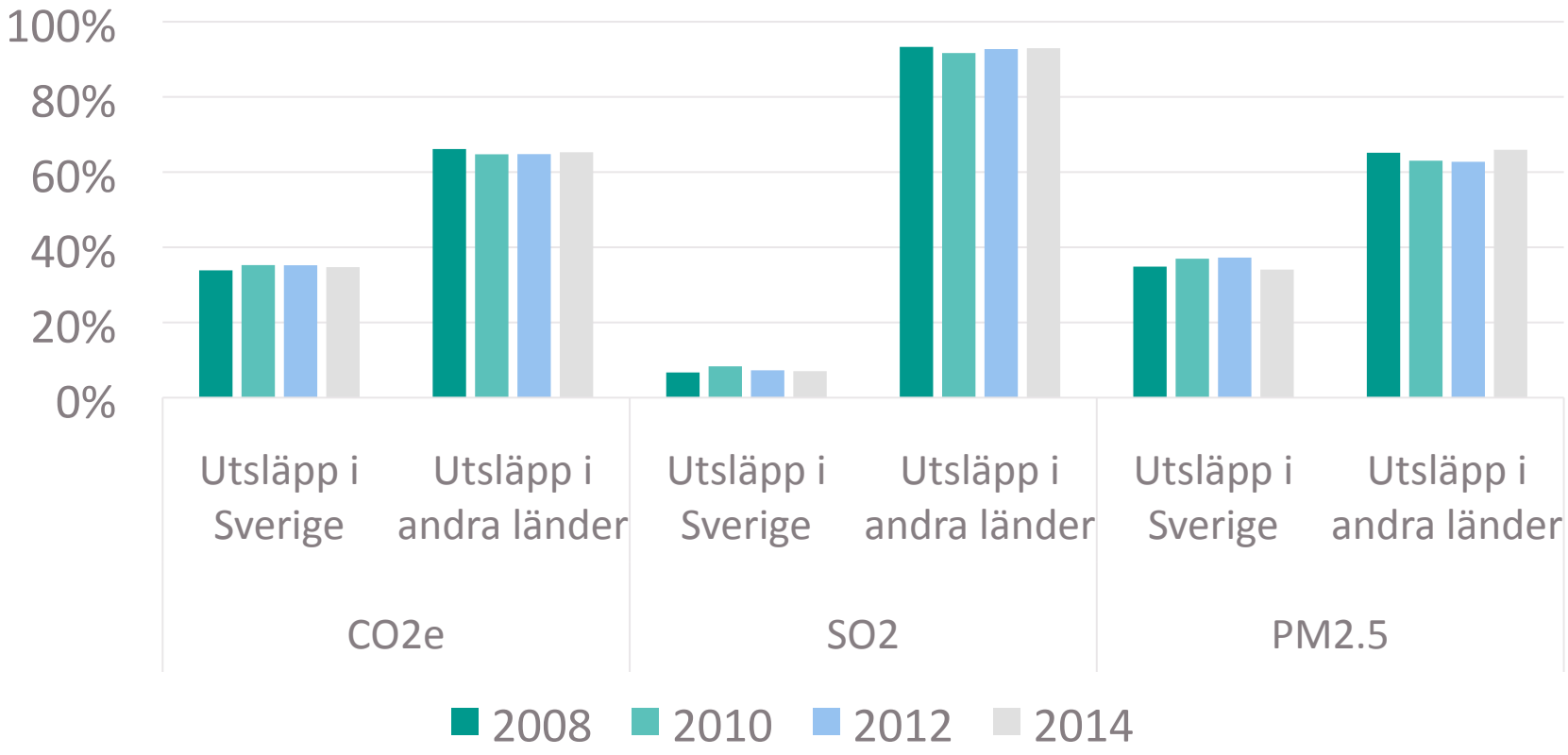
Sweden's footprint

- MRIOs are a compromise between different national statistics
  - Sweden's national statistics never 100% respected
- What method should we use to respect national statistics, and incorporate MRIO data? Hybrid model chosen with EXIOBASE and Swedish model combined.

Environmental extensions

- Pollutants
  - Emissions of greenhouse gases and traditional air pollutants;
  - Chemicals
- Resource use
  - Land, water use, material flows
  - Fish, meat
  - Pesticides, Antibiotics

Emission in Sweden and abroad from Swedish consumption

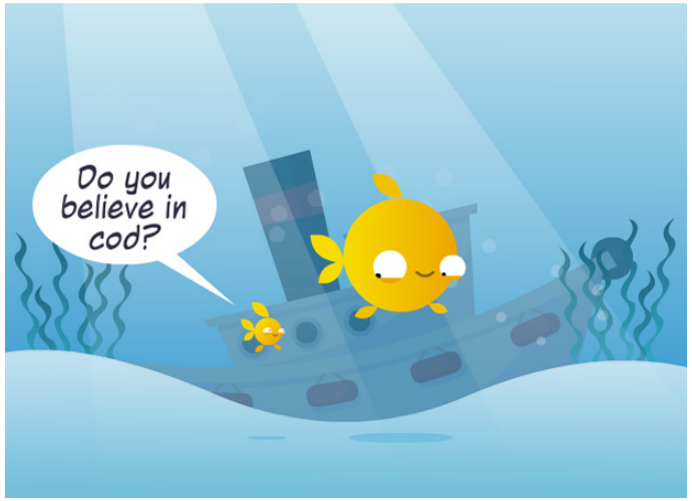


Indicator	Unit	Data source
Hazardous chemicals	kg chemical product per labelling class and year	Chemical product register, SEEA
Pesticides	kg active substanse per year	FAOSTAT
Veterinary medicine	kg active ingrediens per year	ESVAC

Water use

- Water Footprints provide information on consumption but not impact.
- To account for water-related impacts we need to know about the water scarcity at the place where the water is used
- Investigated two water scarcity measures to accompany existing water use. Best data in connection to food.

Fish



- Much fisheries extraction relies on direct exploitation of ‘wild’ species.
- Fisheries are diverse: various fishing methods, various species caught, with varying vulnerability and varying discard rates.
- Method suggested to measure these aspects by combining several different data sources.

Food

Focus on climate footprint from food chain

Prince include more data

- CO2 from deforestation in countries where Swedish food chain is involved
- Agro chemicals, pesticides, veterinary medecin
- Land use

Thanks!

Swedish report in 2018

Research papers have been submitted

Home page: prince-project.se