



CONNEL / SHUTTERSTOCK

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## PRINCE: Monitoring the Global Environmental Costs of Swedish Consumption

*A society in which the major environmental problems in Sweden have been solved – without increasing environmental and health problems outside Sweden's borders*

This is what Sweden has committed to deliver to the next generation with the Generational Goal, the overarching goal of Sweden's environmental policy. But how will we know if we are on track?

**PRINCE** is a three-year project (2015–2018) developing a framework for monitoring the global environmental impacts associated with goods and services consumed in Sweden, using the latest modelling and statistical techniques.

### Why focus on consumption

Consumption is one of the chief ways that economies impact the environment. These impacts might come through, for example, extracting raw materials; land use, such as agriculture; land-use changes, such as deforestation for timber, cropland or pasture; emissions of hazardous chemicals or greenhouse gases during production or transportation; the water and energy used in manufacturing; over-exploitation of fisheries . . .

Sweden maintains good statistics on the environmental performance of its own farms, factories and transportation system. But several studies have found that this cannot tell us whether Swedish consumption is increasing environmental problems outside Sweden's borders, even as it reduces them at home.

A large share of what is consumed in Sweden is imported. PRINCE will help to keep track of the environmental pressures involved in producing these imported goods and services.

### PRINCE

PRINCE – for Policy-Relevant Indicators for National Consumption and Environment – responds to a call from the Swedish Environmental Protection Agency (EPA) and the Swedish Agency for Marine and Water Management (SwAM) for a new monitoring framework that:

- uses a sound and repeatable methodology
- includes indicators for a wide range of environmental pressures
- provides a sound basis for policy decisions.

In 2017, PRINCE will produce a monitoring framework including indicators for a wide range of environmental pressures, some of them rarely monitored at this scale, along with a baseline monitoring report and case studies.

### Environmental pressures

PRINCE will explore developing indicators for the following environmental pressures and impacts:

PRINCE is funded by a research grant administered by the Swedish Environmental Protection Agency (Naturvårdsverket) and the Swedish Agency for Marine and Water Management (SwAM).



Amazonian forest being cleared to raise cattle. Brazil is the third largest producer and exporter of beef in the world.

### Agriculture and other land-based production

- greenhouse gas implications of land-use change (e.g. the loss of carbon sink capacity when forest is replaced by agricultural land)
- emissions of chemicals that can cause eutrophication, particularly nitrogen and phosphorus
- investigate release of greenhouse gases other than CO<sub>2</sub> from livestock rearing.

### Chemicals

- use and emissions of hazardous chemicals in land-based production, including pesticides.

### Use of resources

- metals, timber, energy
- land area
- water use
- emissions to air, including greenhouse gases.

### The PRINCE team

PRINCE is being implemented by a consortium of leading Swedish and European institutes. Led by **Statistics Sweden** (SCB; the Swedish national statistical bureau), the team includes statisticians, economists, engineers, physicists, biologists, mathematicians, social scientists and communication experts. The other consortium members are:

### How will it work?

PRINCE will produce indicators of global environmental pressures linked to Swedish consumption by:

1. tracing the flow of materials through the global economy, from the producers to Sweden, using cutting-edge multi-regional input-output (MRIO) modeling
2. estimating the environmental pressures linked to producing goods and services from those materials, based on what we know about, for example, industry, agriculture and environmental conditions in the producer countries.

The data will be broken down by:

- different categories of goods and services consumed
- government or household consumption.

It will also be possible to identify the countries where the environmental pressures occur.

- Stockholm Environment Institute
- Norwegian University of Science and Technology (NTNU)
- KTH Royal Institute of Technology
- Chalmers University of Technology
- Leiden University Institute of Environmental Sciences (CML)
- Netherlands Organisation for Applied Scientific Research (TNO).

### Timeframe

PRINCE was launched in February 2015. It will run until the first half of 2018. The findings will be published and presented at an open conference in Stockholm in early 2018.



Read PRINCE news, blogs, publications at:  
[www.prince-project.se](http://www.prince-project.se)

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