

Swedish Footprints: Policy-Relevant Indicators for Consumption and Environment

Topic: 714F Environmental IO Modelling (3)

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This presentation introduces the input-output relevant work of PRINCE (Policy-Relevant Indicators for Consumption and Environment). PRINCE is a multi-partner, cross-disciplinary project aiming to develop a sound and repeatable methodology to monitor the environmental impacts of Swedish consumption, both inside and outside Sweden's borders.

Sweden has set itself the ambitious goal of handing over to the next generation a society in which the major environmental problems in Sweden have been solved. Significantly, this is to be achieved without increasing environmental and health problems outside Sweden's borders. This so-called Generational Goal constitutes the overarching goal of current Swedish environmental policy. Yet measuring the diverse environmental impacts of a country's consumption, particularly beyond its borders, is extremely challenging. These impacts may be spread along a myriad of long, complex and very fluid global supply chains.

PRINCE responds to a call from the Swedish Environmental Protection Agency (Naturvårdsverket) for a pioneering monitoring framework for its consumption-based accounting, based on the latest modelling and statistical techniques. The framework will cover a uniquely broad range of environmental pressures, including: Emissions of greenhouse gases and traditional air pollutants (SO₂, NO_x, NH₃, VOCs) from fossil fuel burning, manufacturing processes, livestock production and land-use change Impacts of the consumption of resources such as water and land. Exploratory indicators for use or emission of hazardous chemical substances.

PRINCE will develop an economic-environmental monitoring framework based on multi-regional input-output (MRIO) analysis. The research will have four main strands and outputs: Evaluation of existing consumption-based accounting models and calculations, to identify those most appropriate to integrate with Swedish national accounting data. Identification and quantification of a range of environmental pressures from Swedish consumption. Identification of those product groups with the largest environmental impacts, and where those impacts take place. Development of a sound, repeatable methodology for monitoring, in line with official statistical criteria.

This presentation covers the overall goals and first results of the project. It concentrates on methods used to operationalise the accounts - especially the link between the MRIO models, and the available Swedish IO tables.