Standard documentation
Meta information

(Definitions, comments, methods, quality)

on

Material Flow Accounts

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Executive Summary

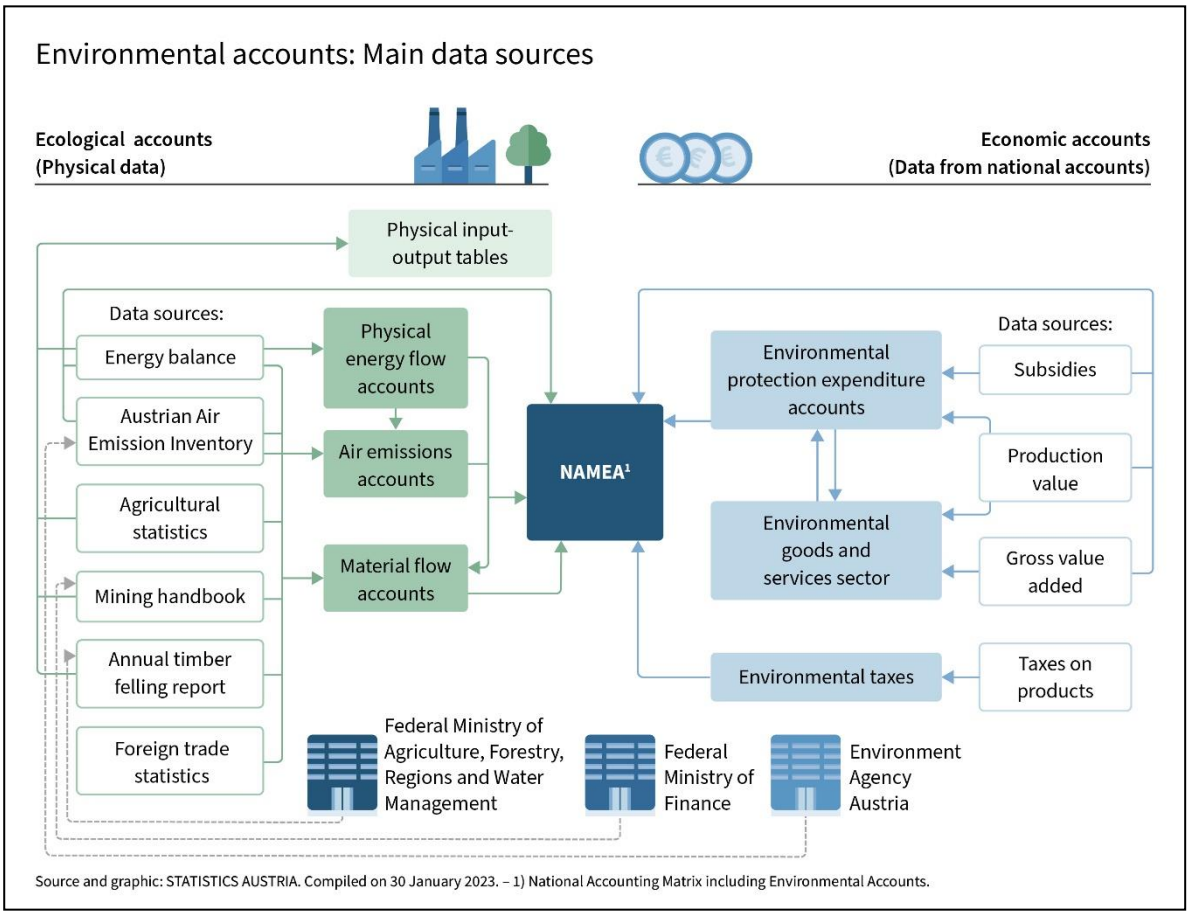
Material Flow Accounts represent a central element of the **Environmental Accounts** and supplement by means of physical data the overall description of the economic processes delivered by the National Accounts (NA) from a monetary viewpoint. They allow the mapping of all material flows in an economy and provide on a high level of aggregation important indicators for the sustainability of resource use. By recording physical flows between the economy and the environment they form an important database for sustainable policies.

All **materials** that are **extracted from nature** and used in the socio-economic system are recorded in the material flow accounts. Through the processing and use of these materials, solid, liquid or gaseous residues are generated, which are recorded as **processed output to nature**. In addition, the material flow accounts also contain **import and export** flows of raw materials and goods made from them.

Figure 1 shows the physical and monetary environmental accounts as well as the integrated accounting systems. Monetary data from the national accounts, such as production value and gross value added, are used for the monetary environmental accounts.

In addition to the Material Flow Accounts, **physical material accounts** include the Physical Energy Flow Accounts and the Air Emissions Accounts. They are based on various basic statistics from Statistics Austria, such as foreign trade statistics and energy balances, as well as on external data sources such as air emissions data of the Environment Agency Austria. The various environmental accounts also complement each other with information. In addition, there are so-called **hybrid accounts** such as the integrated NAMEA, which contain both monetary and physical data.

Figure 1: The Environmental Accounts



Source: Statistics Austria

Environmental accounts are satellite accounts of national accounts. The calculations follow the logic and **criteria of the National Accounts (NA)** and **estimation methods** are used in areas where the available data does not permit any other option. The data required for calculation of the material flows is taken from different basic statistics of Statistics Austria (foreign trade statistics, energy balances, harvest statistics, etc.) and from selected external data sources (Austrian Handbook on Mining and Metallurgical Industries, logging statistics, etc.). The quality of the Material Flow Accounts therefore strongly depends on the quality of the basic statistics and other data sources used.

The results of the Material Flow Accounts, which are published annually, are used to monitor resource efficiency, resource use and sustainable development. The most important indicators deriving from the Material Flow Accounts are **DMI (= Direct Material Input)**[1] and **DMC (= Domestic Material Consumption)**[2].

The methods used to compile the Material Flow Accounts comply with the **European requirements**, which are laid down in **Regulation (EU) No. 691/2011** on European environmental and economic accounts and specified in the associated methodological manuals. These in turn are based on the international statistical standards established by the United Nations in its **System of Environmental-Economic Accounting Central Framework** (SEEA - CF).

The compilation of the Material Flow Accounts, for which a European **reporting obligation** has existed **since 2013**, is carried out on behalf of the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK).

[1] The DMI (domestic used extraction + imports) measures the direct extraction and use of materials for economic activities and represents the amount of primary materials used and exploited directly for production and consumption. This indicator is measured in tonnes.

[2] The DMC (Domestic Material Consumption): measures the total volume of materials used for consumption within a national economy. In contrast to DMI, it takes exports into account. The unit of measurement is tonnes. Domestic material consumption is calculated as follows: direct material input (DMI) – exports = domestic material consumption (DMC).

Material Flow Accounts – Main Features	
Subject matter	Material flows within the Austrian economy in physical units
Population	All solid, liquid and gaseous materials extracted from the environment or imported that flow into the economic system of a national economy
Type of statistics	Integrated system of statistics
Data sources/Survey techniques	**Basic statistics of Statistics Austria**: Foreign trade statistics, Energy statistics, Agriculture, forestry and fishery statistics, Air Emissions Accounts, Input-Output tables **Other data sources**: Handbook on Mining and Metallurgical Industries (BMF), Logging report (BML), Wood Flows in Austria (BMK), Austrian Air Emission Inventory (Environment Agency Austria), Waste Statistics (Environment Agency Austria & BMK), Situation report on the disposal of urban waste water and sludge (Environment Agency Austria & BML), Green Report (BML), Sales of fertilizers (AMA), Roads and road traffic (BMK), Salt consumption (Road and Transportation Research Association).
Reference period or due day	Calendar year
Periodicity	Annual
Survey participation (in case of a survey)	Not relevant
Main legal acts	National legal basis: agreement under private law with the Federal Ministry of Climate Action, Environment, Energy, Mobility, Innovation and Technology EU legal basis: Regulation (EU) No 691/2011 of the European Parliament and of the Council of 6 July 2011 on European environmental economic accounts
Most detailed regional breakdown	Austria
Availability of results	Preliminary results: t + 12 months Final results: t + 16 months
Other	Domestic concept, time series from 1960, revision of time series in the case of revisions in the basic statistics