

# **Standard-documentation Meta information**

**(Definitions, comments, methods, quality)**

on

## **Material Flow Accounts**

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STATISTICS AUSTRIA  
Bundesanstalt Statistik Österreich  
A-1110 Vienna, Guglgasse 13  
Phone: +43-1-71128-0  
[www.statistik.at](http://www.statistik.at)

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**Directorate Spatial Statistics**  
**Organizational unit Environmental and Energy Statistics**

Contact person:  
Dr. Sylvia Gierlinger  
Phone +43-1-71128-7184  
E-Mail: [sylvia.gierlinger@statistik.gv.at](mailto:sylvia.gierlinger@statistik.gv.at)

## Executive Summary

The aim of the Material Flow Accounts is to show the **physical exchange process between society and nature**. The **flow of materials** is described in a time series starting in 1960 in four key flows: biomass, metal ores, non-metal minerals and fossil fuels.

Material Flow Accounts reflect the importance of resource inputs within an economic system. They illustrate the development of the resource efficiency and material intensity of the Austrian economy.

They are an integrated system of accounts and are prepared using a large number of basic statistics (products of Statistics Austria and external analyses). As such they represent a central element of the Environmental Accounts and supplement the overall description of the economic process delivered by the National Accounts (NA) from a monetary viewpoint. By recording physical flows between the economy and the environment they form an important source of data for sustainable policies.

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 flow of materials is taken from a series of basic statistics from Statistics Austria (foreign trade statistics, energy balances, harvest statistics, etc.) and from external data sources (Austrian Montanhandbuch (Handbook on Mining and Metallurgical Industries), logging, etc.).

The most important indicators from the Material Flow Accounts are DMI (= **D**irect **M**aterial **I**ntput<sup>1</sup>) and DMC (= **D**omestic **M**aterial **C**onsumption<sup>2</sup>).

Emissions from imported products that occur during production in their country of origin (ecological rucksack) are not considered during preparation of the Austrian material flow balances.

The results of the Material Flow Accounts, which are published annually, serve the following national and international objectives:

- to assess the orientation and development of resource consumption;
- as a contribution to the set of indicators covered in the project “How’s Austria?” by Statistics Austria which provides information on various dimensions of wealth and progress beyond GDP;
- for the preparation of collective material flow accounts and the collective estimation of raw material equivalents by the Statistical Office of the European Union (Eurostat);
- as a contribution to the monitoring of the Sustainable Development Goals (SDGs) of the United Nations (Goal 12: ensure sustainable consumption and production patterns).

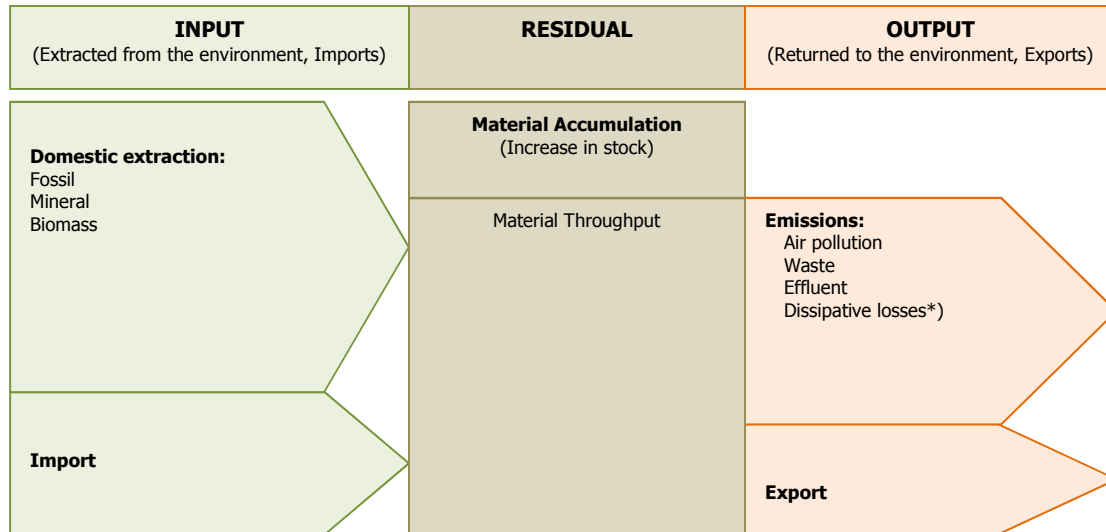
In addition, the results are used in the NAMEA (National Accounting Matrix including Environmental Accounts).

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<sup>1</sup> The DMI (domestic used extraction of abiotic materials + domestic used extraction of biotic materials + imports of biotic and abiotic materials) 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.

<sup>2</sup> The DPO (domestic processed output, i.e. materials released back to nature) is the total weight of residual materials flowing to the domestic environment. This indicator includes air emissions, waste, material loads in wastewater and dissipative material losses, such as those resulting from product abrasion or corrosion or from fertiliser use in agriculture.

## Material flow accounts



Source: EUROSTAT. -\*) Tyre and brake abrasion are grouped together as dissipative losses.

| <b>Material Flow Accounts – Main Features</b>     |   |
|---|---|
| <b>Subject matter</b>                             | Material flows within the Austrian economy in physical units  |
| <b>Population</b>                                 | All solid, liquid and gaseous materials extracted from the environment or imported that flow into the economic system of a national economy   |
| <b>Type of statistics</b>                         | Integrated system of statistics   |
| <b>Data sources/Survey techniques</b>             | <p>Basic statistics of Statistics Austria</p> <ul style="list-style-type: none"> <li>• Foreign trade statistics</li> <li>• Austrian energy balances</li> <li>• Physical energy flow accounts (PEFA)</li> <li>• Road vehicles statistics</li> <li>• Short-term business statistics survey</li> <li>• Crop and livestock production data</li> <li>• Livestock</li> <li>• Supply balance sheets</li> <li>• Harvest statistics</li> </ul> <p>Other data sources</p> <ul style="list-style-type: none"> <li>• Austrian Montanhandbuch (Handbook on Mining and Metallurgical Industries), Federal Ministry of Sustainability and Tourism (BMNT)</li> <li>• Federal Waste Management Plan, Environment Agency Austria</li> <li>• Logging report, Federal Ministry of Sustainability and Tourism (BMNT)</li> <li>• Air emission and greenhouse gas inventory, Environment Agency Austria</li> <li>• Report on waste water treatment plants in Austria, Environment Agency Austria</li> <li>• “Grüner Bericht” (BMNT)</li> </ul> |
| <b>Reference period or due day</b>                | Calendar year   |
| <b>Periodicity</b>                                | Annual  |
| <b>Survey participation (in case of a survey)</b> | Not relevant  |
| <b>Main legal acts</b>                            | <p>National legal basis: agreement under private law with the Federal Ministry of Sustainability and Tourism</p> <p>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</p>  |
| <b>Most detailed regional breakdown</b>           | Austria   |
| <b>Availability of results</b>                    | t + 2 years   |
| <b>Other</b>                                      | Domestic concept, time series from 1960, revision of time series in the case of revisions in the basic statistics   |