

First Release

Year: LX.

Zagreb, 15 December 2023

OEN-2023-1-7

ISSN 1334-0557



ECONOMY-WIDE MATERIAL FLOW ACCOUNTS, 2018 – 2022

Economy-wide material flow accounts that include domestic extraction, intra-EU and extra-EU import and export as well as domestic processed output for the Republic of Croatia are presented for the period from 2018 to 2022.

In 2022, the value of the direct material input was 65 237 thousand tonnes (63.1% from domestic sources and 36.9% from import), which was 1.1% less than in 2021.

Domestic material consumption in 2022 was 46 156 thousand tonnes, which was 2.5% more than in 2021.

The import of materials in 2022 amounted to 24 054 thousand tonnes, which means it increased by 2.7% compared to 2021. The export of materials amounted to 19 081 thousand tonnes, which is a decrease of 8.8% compared to the previous year. The physical trade balance amounted to 4 973 thousand tonnes in 2022.

1 DOMESTIC EXTRACTION¹⁾

'000 tonnes

	2018	2019	2020	2021	2022
Total ²⁾	41 208	41 460	42 495	42 508	41 183
Biomass	15 233	15 473	16 111	15 327	13 964
Non-metallic minerals	24 166	24 362	25 003	25 885	26 028
Fossil energy materials/carriers	1 808	1 625	1 382	1 296	1 191

1) New calculations according to the recommended Eurostat methodology are used each year to calculate material flow. Therefore, some data are not comparable to the data from the First Release OEN-2022-1-7.

2) The sum total of some values does not equal the sum of items due to the expression of numbers in thousands.

2 IMPORT OF CROATIA – INTRA-EU + EXTRA-EU TRADE

'000 tonnes

	2018	2019	2020	2021	2022
Total ¹⁾	18 890	20 139	21 701	23 428	24 054
Biomass and biomass products	4 388	4 689	4 510	5 016	5 398
Metal ores and concentrates, raw and processed	2 122	2 352	2 437	2 779	2 897
Non-metallic minerals, raw and processed	4 140	4 854	5 265	5 592	5 710
Fossil energy materials/carriers, raw and processed	7 003	6 944	8 190	8 591	8 588
Other products	1 235	1 294	1 275	1 415	1 430
Waste imported for final treatment and disposal	0	5	24	35	32

1) The sum total of some values does not equal the sum of items due to the expression of numbers in thousands.

3 EXPORT OF CROATIA – INTRA-EU + EXTRA-EU TRADE

'000 tonnes

	2018	2019	2020	2021	2022
Total ¹⁾	17 469	17 601	19 488	20 913	19 081
Biomass and biomass products	6 937	7 433	7 617	8 254	7 837
Metal ores and concentrates, raw and processed	1 398	1 477	1 533	1 892	1 948
Non-metallic minerals, raw and processed	5 674	5 380	5 522	5 974	5 404
Fossil energy materials/carriers, raw and processed	2 907	2 723	4 246	4 028	3 262
Other products	542	578	558	750	618
Waste imported for final treatment and disposal	11	9	12	16	12

1) The sum total of some values does not equal the sum of items due to the expression of numbers in thousands.

4 DOMESTIC PROCESSED OUTPUT¹⁾

'000 tonnes

	2018	2019	2020	2021	2022
Emissions to air	24 652	24 910	23 996	25 229	26 112
Waste disposal to controlled landfills	1 639	1 616	1 452	1 593	1 718
Emissions to water	47	40	40	45	45
Dissipative use of products ²⁾	1 619	1 597	1 590	1 620	1 583
Dissipative losses	1	1	1	1	1

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2) Dissipative use of products includes the use of mineral and organic fertilizers, sewage sludge, compost and pesticides.

5 MATERIAL FLOW INDICATORS, 2022

'000 tonnes

	Domestic extraction	Import	Export	Direct material input	Domestic material consumption	Physical trade balance
	1	2	3	4 = 1 + 2	5 = 4 - 3	6 = 2 - 3
Materials, total ¹⁾	41 183	24 054	19 081	65 237	46 156	4 973
Biomass and biomass products	13 964	5 398	7 837	19 362	11 524	-2 440
Metal ores and concentrates, raw and processed	0	2 897	1 948	2 897	949	949
Non-metallic minerals, raw and processed	26 028	5 710	5 404	31 738	26 334	306
Fossil energy materials/carriers, raw and processed	1 191	8 588	3 262	9 779	6 516	5 325
Other products	0	1 430	618	1 430	812	812
Waste	0	32	12	32	21	21

1) The sum total of some values does not equal the sum of items due to the expression of numbers in thousands.

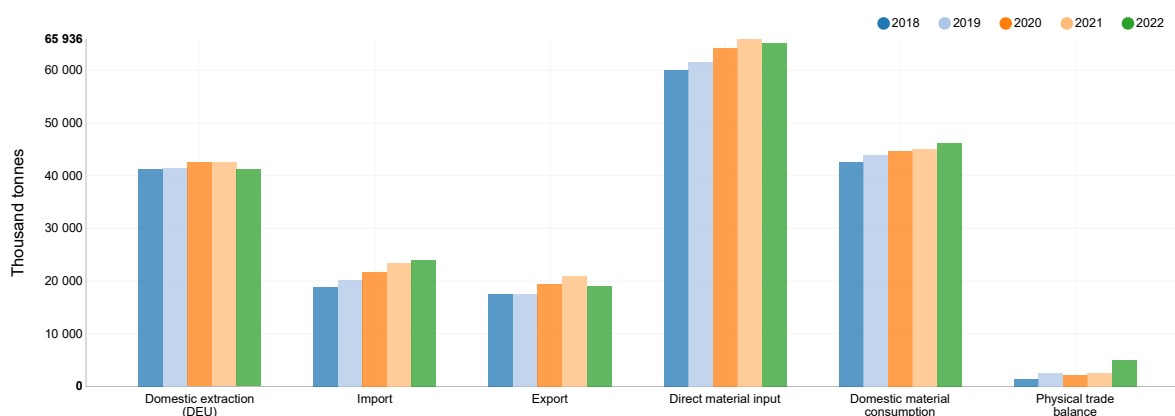
6 MATERIAL FLOW INDICATORS, 2018 – 2022¹⁾

'000 tonnes

	2018	2019	2020	2021	2022
Domestic extraction (DEU)	41 208	41 460	42 495	42 508	41 183
Import	18 890	20 139	21 701	23 428	24 054
Export	17 469	17 601	19 488	20 913	19 081
Direct material input	60 097	61 600	64 196	65 936	65 237
Domestic material consumption	42 628	43 999	44 708	45 023	46 156
Physical trade balance	1 420	2 538	2 213	2 515	4 973

1) New calculations according to the recommended Eurostat methodology are used each year to calculate material flow. Therefore, some data are not comparable to the data from the First Release OEN-2022-1-7.

G-1 MATERIAL FLOW INDICATORS, 2018 – 2022



NOTES ON METHODOLOGY

Sources and methods of data collection

The source of data on economy-wide material flow accounts is the Croatian Bureau of Statistics.

Economy-wide material flow accounts are one of the several physical modules of the Eurostat's programme of European environmental economic accounts. They are covered by the Regulation (EU) No 691/2011 of the European Parliament and the Council of 6 July 2011 on European environmental economic accounts.

Economy-wide material flow accounts (EW-MFA) record flows of natural inputs (domestic extraction of materials) and products (import, export) in a detailed breakdown by approximately 50 material categories. Material flow data presented in this First Release employ the following main material categories:

1. Biomass and biomass products: crops and products thereof, crop residues and fodder crops
2. Metal ores and concentrates and products thereof
3. Non-metallic minerals and products thereof
4. Fossil energy material/carriers and products thereof (coal, petroleum, gas etc.)
5. Other products and waste.

Definitions

Biomass refers to the biodegradable components of products, waste and residue of agriculture (including plant and animal matter), forestry and wood industries, as well as biodegradable parts of municipal and industrial waste, the energy usage of which is allowed.

Minerals are natural homogeneous bodies of permanent chemical composition and determined physical characteristics that occur in specific geometric forms (crystals) or undetermined physical characteristics.

Ore is a mineral aggregate from which it is technically viable and economically justifiable to produce metals and/or other minerals usable in industry.

Concentrates are products of ore enrichment that have a significantly increased metal content compared to ore contents and are appropriate for further metallurgical processing and production of metal.

Non-metallic mineral raw material are raw materials which do not produce new raw materials as a result of melting, and are usually integrated in sedimentary rocks (quartz raw materials, clay, salt, dolomite, phosphorite, graphite, bauxite and cement raw materials).

Fossil energy materials/carriers are produced naturally beneath Earth's surface during a long period of time from biological remains. Fossil fuels are not renewable energy sources. There are three main forms of fossil fuels: coal, petroleum and natural gas.

Waste is every substance or object that was, is going to be or has to be discarded by its owner. Every discarded object and substance the gathering, transport and processing of which are necessary for the protection of the public interest is considered waste.

Domestic extraction used (DEU) is the annual amount of raw materials (except for water and air) extracted from the natural environment to be used in the economy.

Domestic material consumption (DMC) is defined as the total amount of material directly used in the economy.

Domestic material consumption (DMC) = domestic extraction used + import – export

Direct material input (DMI) = domestic extraction used + import

Physical trade balance (PTB) is calculated by subtracting the amount of export in physical units from the amount of import in physical units, as follows:

Physical trade balance (PTB) = import – export.

Abbreviations

EU	European Union
Eurostat	Statistical Office of the European Union
'000	thousand

Symbols

0 value not zero but less than 0.5 of the unit of measure used

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