

## First Release

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# ECONOMY-WIDE MATERIAL FLOW ACCOUNTS, 2020 – 2024

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 2020 to 2024.

In 2024, the value of the direct material input was **71 005 thousand tonnes** (61.2% from domestic sources and 38.8% from import), which was 6.7% more than in 2023.

Domestic material consumption in 2024 was 50 968 thousand tonnes, which was 4.6% more than in 2023.

The import of materials in 2024 amounted to 27 527 thousand tonnes, which means it increased by 13.1% compared to 2023. The export of materials amounted to 20 037 thousand tonnes, which was an increase of 12.3% compared to the previous year. The physical trade balance amounted to **7 490 thousand tonnes** in 2024.

Raw material consumption in 2024 amounted to **67 750 thousand tonnes**, which was a 13.1% increase compared to 2023.

## 1 DOMESTIC EXTRACTION<sup>1)</sup>

'000 tonnes

	2020	2021	2022	2023	2024
Total <sup>2)</sup>	42 495	42 508	41 235	42 215	43 478
Biomass	16 111	15 327	13 964	14 082	14 599
Non-metallic minerals	25 003	25 885	26 028	26 963	27 710
Fossil energy materials/carriers	1 382	1 296	1 243	1 170	1 169

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-2024-1-7.

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

	2020	2021	2022	2023	2024
Total <sup>1)</sup>	21 701	23 428	24 054	24 331	27 527
Biomass and biomass products	4 510	5 016	5 398	5 607	5 717
Metal ores and concentrates, raw and processed	2 437	2 779	2 897	2 909	2 970
Non-metallic minerals, raw and processed	5 265	5 592	5 710	5 877	7 445
Fossil energy materials/carriers, raw and processed	8 190	8 591	8 588	8 498	9 832
Other products	1 275	1 415	1 430	1 405	1 532
Waste imported for final treatment and disposal	24	35	32	35	31

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

	2020	2021	2022	2023	2024
Total <sup>1)</sup>	19 488	20 913	19 081	17 835	20 037
Biomass and biomass products	7 617	8 254	7 837	7 344	7 992
Metal ores and concentrates, raw and processed	1 533	1 892	1 948	1 861	1 721
Non-metallic minerals, raw and processed	5 522	5 974	5 404	4 815	5 294
Fossil energy materials/carriers, raw and processed	4 246	4 028	3 262	3 239	4 393
Other products	558	750	618	554	624
Waste imported for final treatment and disposal	12	16	12	21	14

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 OUTPUT<sup>1)</sup>

'000 tonnes

	2020	2021	2022	2023	2024
Emissions to air	23 977	25 233	24 915	25 784	25 784
Waste disposal to controlled landfills	1 452	1 593	1 718	1 644	1 611
Emissions to water	40	45	45	45	45
Dissipative use of products <sup>2)</sup>	1 569	1 598	1 394	1 372	1 391
Dissipative losses	1	1	1	1	1

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-2024-1-7.

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

## 5 MATERIAL FLOW INDICATORS, 2024

'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 <sup>1)</sup>	43 478	27 527	20 037	71 005	50 968	7 490
Biomass and biomass products	14 599	5 717	7 992	20 316	12 324	-2 274
Metal ores and concentrates, raw and processed	0	2 970	1 721	2 970	1 249	1 249
Non-metallic minerals, raw and processed	27 710	7 445	5 294	35 155	29 861	2 152
Fossil energy materials/carriers, raw and processed	1 169	9 832	4 393	11 001	6 608	5 439
Other products	0	1 532	624	1 532	908	907
Waste	0	31	14	31	17	17

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, 2020 – 2024<sup>1)</sup>

'000 tonnes

	2020	2021	2022	2023	2024
Domestic extraction used (DEU)	42 495	42 508	41 235	42 215	43 478
Import	21 701	23 428	24 054	24 331	27 527
Export	19 488	20 913	19 081	17 835	20 037
Direct material input	64 196	65 936	65 289	66 546	71 005
Domestic material consumption	44 708	45 023	46 208	48 711	50 968
Physical trade balance	2 213	2 515	4 973	6 496	7 490

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-2024-1-7.

## 7 RAW MATERIAL CONSUMPTION (MATERIAL FOOTPRINT), 2020 – 2024<sup>1)</sup>

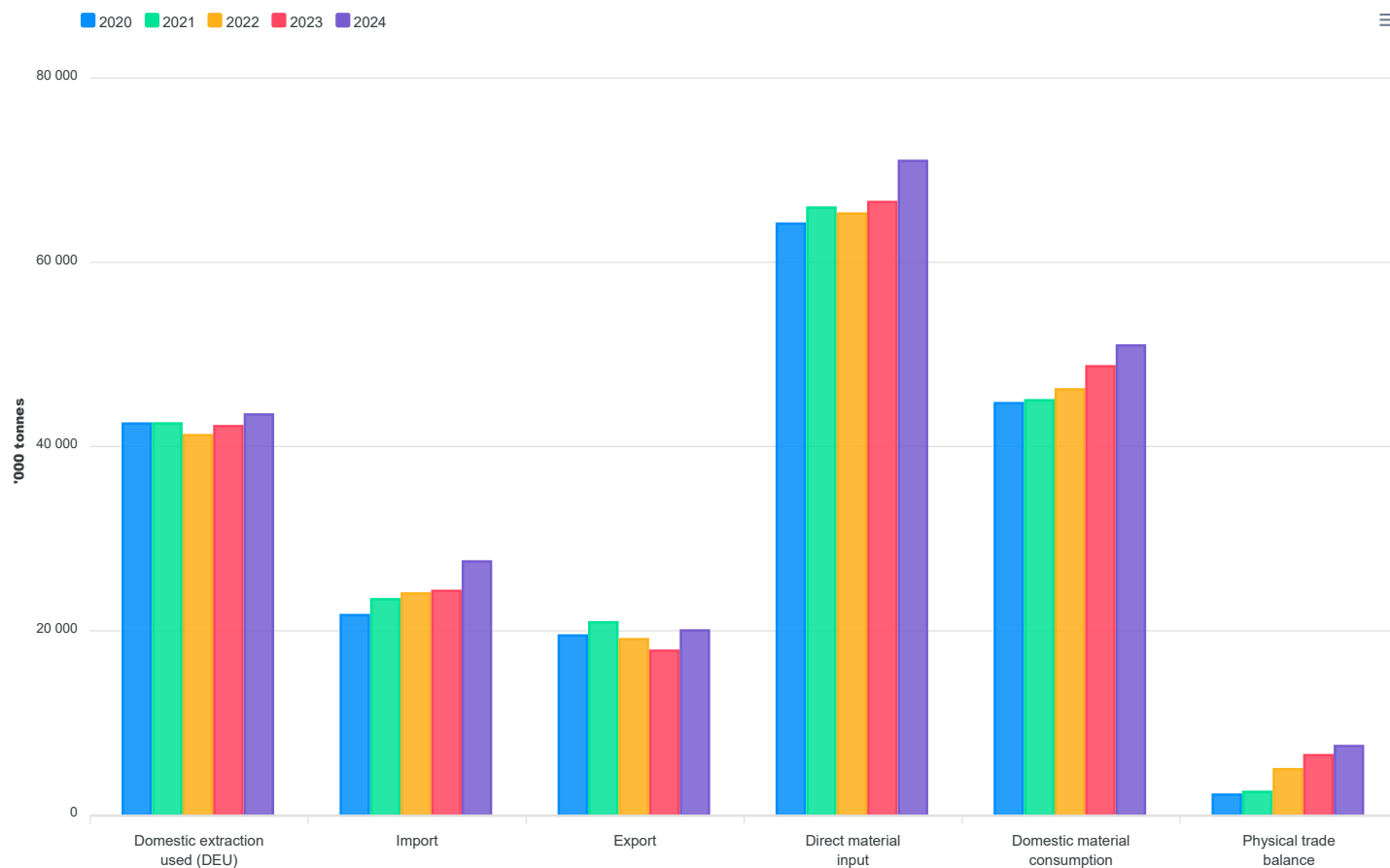
'000 tonnes

	2020	2021	2022	2023	2024
Total <sup>2)</sup>	57 986	62 243	57 808	59 910	67 750
Biomass and biomass products	15 135	15 133	13 995	14 153	16 800
Metal ores and concentrates, raw and processed	4 802	7 182	5 122	5 763	7 950
Non-metallic minerals, raw and processed	28 316	29 137	28 451	30 054	32 000
Fossil energy materials/carriers, raw and processed	9 732	10 791	10 239	9 940	11 000

1) Since 2025, the Croatian Bureau of Statistics has been publishing data on the material footprint for the Republic of Croatia. The material footprint indicator has been calculated as part of a project co-financed by the European Union.

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

## G-1 MATERIAL FLOW INDICATORS, 2020 – 2024



## 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 metallurgic processing and production of metal.

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

**Fossil energy materials/carriers** are produced naturally beneath the Earth's surface 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 material (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.

**Raw material consumption (RMC)** captures the amount of domestic and foreign extraction of materials needed to produce the final products used by national economy. The material flow indicator RMC is also known as "material footprint."

## 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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