

Material Flow Accounts

Tirana, 23 April 2025

Domestic extraction

In 2023, the raw material extracted from domestic natural resources, which represents the total amount of materials directly used in the economy, amounted to approximately 20.5 million tons, marking an increase of 1.3% compared to 2022.

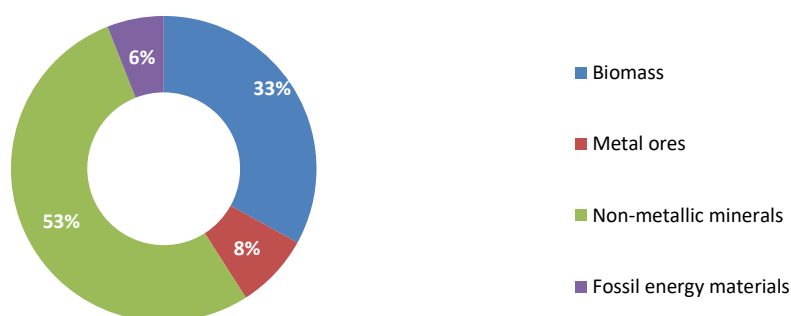
Tab.1 Domestic extraction (DE), 000 tonnes

Year	2022	2023
Biomass	7,053.3	6,753.4
Metal ores	2,045.8	1,624.1
Non-metallic minerals	10,018.9	10,845.1
Fossil energy materials/carriers	1,070.1	1,225.5
Total	20,188.2	20,448.1

Source of data: Ministry of Agriculture and Rural Development, National Agency of Natural Resources, Water Resources Management Agency, processed by INSTAT

The structure of domestic natural resources shows that "non-metallic minerals" account for approximately 53%, "biomass" 33%, "metallic minerals and concentrates" 8%, and "fossil energy materials" 6% of the total materials.

Fig.1 Structure of domestic extraction (DE), %



Source of data: Ministry of Agriculture and Rural Development, National Agency of Natural Resources, Water Resources Management Agency, processed by INSTAT

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In 2023, imports of environmental materials reached a value of approximately 5.5 million tons, which represents an increase of 8.19 % compared to 2022. The main contributor to this increase was “metallic minerals and concentrates,” with a growth of 10.80%. During 2023, there were also increases in “fossil energy materials” by 9.37 %, “non-metallic minerals” by 7.97 %, “biomass” by 7.02 %, and “other imported products and waste” by 1.63 %.

Tab.2 Imports of materials by category, (000 tonnes)

Year	2022	2023
Biomass and biomass products	1,414.7	1,514.0
Metal ores and concentrates	1,119.3	1,240.2
Non-metallic minerals	1,166.9	1,259.8
Fossil energy materials/carriers	1,045.7	1,143.8
Other products and waste imported	343.2	348.8
Total	5,089.9	5,506.6

Source of data: General Directorate of Customs, processed by INSTAT

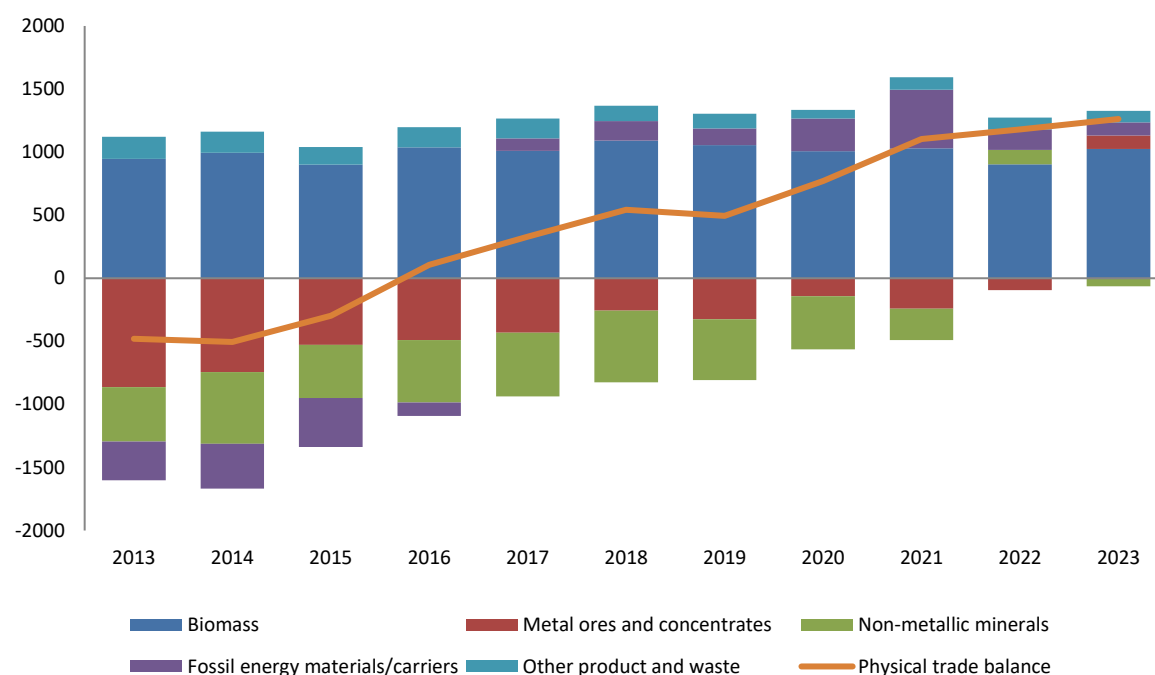
In 2023, exports of environmental materials reached approximately 4.2 million tons, marking an increase of 8.53 % compared to 2022. The main contributor to this growth was “non-metallic minerals,” whose exports rose by 25.86 %. During 2023, there was a decline in exports of “metallic minerals and concentrates” by 6.56 % and “biomass” by 4.29 %. On the other hand, exports of “fossil energy minerals” and “other exported products and waste” increased by 17.40 % and 3.69 %, respectively.

Tab. 3 Exports of materials by category, (000 tonnes)

Year	2022	2023
Biomass	511.2	489.3
Metal ores and concentrates	1,214.0	1,132.4
Non-metallic minerals	1,051.9	1,324.0
Fossil energy materials/carriers	883.6	1,037.4
Other products and waste exported	249.9	259.1
Total	3,910.7	4,244.2

Source of data: General Directorate of Customs, processed by INSTAT

The physical trade balance, which represents the difference between imports and exports for all categories of environmental materials, reached a value of approximately 1.3 thousand tons in 2023, marking an increase of about 83 thousand tons compared to 2022. As shown in Figure 2, in 2023, the categories of “biomass,” “fossil energy materials,” “metallic minerals and concentrates,” and “other products and waste” had a positive trade balance, while the category of “non-metallic minerals” had a negative trade balance.

Fig.2 Physical trade balance, 000 tonnes

Source of data: Ministry of Agriculture and Rural Development, National Agency of Natural Resources, Water Resources Management Agency, processed by INSTAT

Table 4 shows the dependency on imports of environmental materials, which is calculated as the ratio between imports of environmental materials and the direct material input (DMI) in the Albanian economy. DMI is estimated as the sum of materials extracted from domestic natural resources and material imports. In 2023, the dependency on imported materials was estimated at 21.1 %, marking an increase of 1.1 percentage points compared to the previous year. During the period 2019–2023, the dependency on material imports fluctuated between 17.8 % in 2019 and 21.2 % in 2023.

In 2023, fossil energy materials had the highest import dependency, at approximately 48.3%, followed by metallic minerals and concentrates at 43.3 %. On the other hand, non-metallic minerals had the lowest import dependency at 10.4 %, followed by biomass inputs at 18.3 %.

Tab.4 Material import dependency, %

Year	2022	2023
Biomass	16.7	18.3
Metal ores and concentrates	35.4	43.3
Non-metallic minerals	10.4	10.4
Fossil energy materials/carriers	49.4	48.3
Total	20.1	21.2

Source of data: Ministry of Agriculture and Rural Development, National Agency of Natural Resources, Water Resources Management Agency, processed by INSTAT

The domestic material consumption

Domestic use of environmental materials measures the total annual quantity of raw materials extracted from the environment, taking into account the physical trade balance. In 2023, the domestic use of environmental materials reached approximately 21.7 million tons, which is 2% higher compared to 2022.

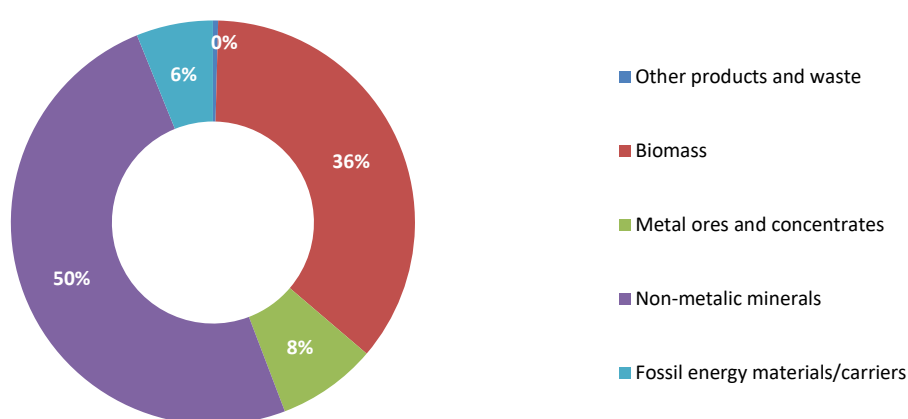
Tab.5 Domestic material consumption (DMC), 000 tonnes

Year	2022	2023
Biomass	7,957.8	7,777.8
Metal ores and concentrates	1,951.1	1,729.9
Non-metallic minerals	10,133.9	10,781.0
Fossil energy materials/carriers	1,232.3	1,331.8
Other products and waste	93.2	89.6
Total	21,367.4	21,710.0

Source of data: Ministry of Agriculture and Rural Development, National Agency of Natural Resources, Water Resources Management Agency, processed by INSTAT

According to its structure, we see that the largest share of internal use of environmental materials is occupied by "non-metallic minerals" with 50 %, "biomass products" with 36 %, "metal concentrates" with 8 %, and "fossil energy materials" with 6 %, followed by "other products" with 0.4 %.

Fig.3 Structure of Domestic material consumption 2023 (DMC), %



Source of data: Ministry of Agriculture and Rural Development, National Agency of Natural Resources, Water Resources Management Agency, processed by INSTAT

The internal use of environmental materials per capita was estimated at 9 tons per person, marking an increase of 1.3 tons per person compared to 2022, when this value was around 7.7 tons per person.

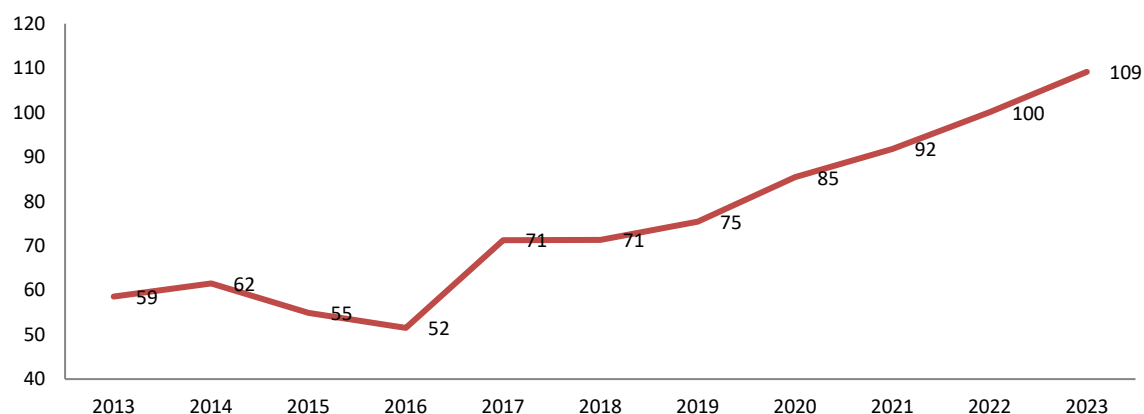
Tab.6 Domestic material consumption (DMC) per capita, tonnes / capita

Year	2022	2023
Biomass	2.9	3.2
Metal ores and concentrates	0.7	0.7
Non-metallic minerals	3.6	4.5
Fossil energy materials/carriers	0.4	0.6
Other products and waste	0.0	0.0
Total	7.7	9.0

Source of data: Ministry of Agriculture and Rural Development, National Agency of Natural Resources, Water Resources Management Agency, processed by INSTAT

The figure below shows the resource productivity in the Albanian economy for the period 2013 – 2023. Resource productivity is calculated as the ratio between gross domestic product and internal use of environmental materials. This ratio represents the amount of money generated for each kilogram of environmental material that enters the country's economy. In 2023, resource productivity reached the value of 109 Lekë per kg, marking an increase of 9 Lekë per kg compared to the previous year.

Fig.4 Resource productivity 2013– 2023, ALL / kg



Source of data: Ministry of Agriculture and Rural Development, National Agency of Natural Resources, Water Resources Management Agency, processed by INSTAT

Methodology

The Material flow Accounts (MFA) are one of the modules of the Environmental Accounts which collects complementary data on environment in line with the concept used to compile the System of National Accounts (SNA)

The Material Flow Accounts (MFA) have the main objective to describe the relationship between the domestic economy and its natural environment. It includes the total amount of natural resources and products used in the economy, either directly in the production and distribution of products and services, or indirectly by extracting the materials that will be used for production.

These data are subject to revision. For more information refer to: <http://instat.gov.al/en/documentation/quality-in-statistics/>

Some of the key categories and main indicators of the material flow accounts are:

Biomass

Biomass includes organic non-fossil materials. According to the definitions of the MFA, the materials extracted from natural resources includes all agricultural products, wild fish and hunting animals. Livestock and livestock products (such as milk, meat, eggs) are not included.

Metal ores and non-metallic minerals

Metal ores and non-metallic minerals are two main material groups of the MFA. According to the definitions of the Material Flow Accounts (MFA), those categories consist of minerals obtained in the mining and construction industry.

Fossil energy materials/carriers

Include sources of oil and other fossil energy materials that have been formed in the geological past from biomass. They include solid substances, liquids and gases.

Domestic extraction (DE)

The domestic extraction (DE) includes the amount of materials (excluding water and air) extracted from the environment for the use of economic purposes.

Domestic material consumption (DMC)

The domestic material consumption (DMC) measures the annual amount of materials extracted and used in the national economy, plus all physical imports, excluding all physical exports.

Physical trade balance (PTB)

The physical balance of trade is equal to physical imports minus physical exports.

Material import dependency (ID): is calculated as the ratio of imports over direct material inputs (DMI) in percentage. The term 'material import dependency' shows the extent to which an economy relies upon imports in order to meet its material needs. Material import dependency cannot be negative or higher than 100%. Values equal to 100% indicate that there are no domestic extractions during the reference year.

$$ID = \frac{Imports}{(Domestic\ extraction + Imports)}$$

Resource productivity designates an indicator that reflects the GDP generated per unit of resources used by the economy.

Data sources

The data used to compile the Material Flow Accounts are administrative data received from the Ministry of Agriculture and Rural Development (MARD), the National Agency of Natural Resources (NANR) Water Resources Management Agency (WRMA) and the Institute of Statistics (INSTAT)

The methodology used for the calculation complies with the Regulation (EU) No. 691/2011 on Material Flow Accounts and Eurostat manuals.