

# Material Flow Account

## Year 2016

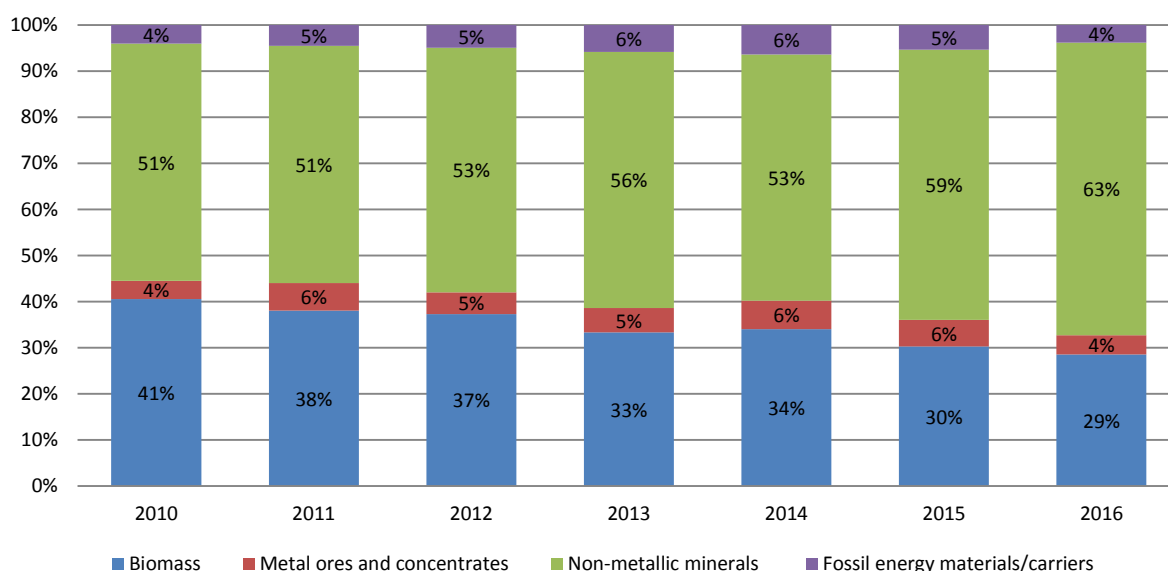
**Tirana, 20 April 2018:** In 2016, materials extracted from domestic natural resources which represents the total amount of materials directly used in the economy, amounted to about 28 million tonnes with an increase of 7.97 % compared to 2015. According to the structure, in 2016, non-metallic minerals account for 63.48 % at the total, followed by biomass with 28.56 %, metal ores with 4.15 % and fossil energy materials and carriers with 3.81 %.

**Tab. 1 Domestic extraction (DE)**

(000 tonnes)

Year	2012	2013	2014	2015	2016
Biomass	7,726.99	7,836.32	7,882.53	7,966.59	8,117.51
Metal ores	977.09	1,243.79	1,436.88	1,528.71	1,180.02
Non-metallic minerals	10,971.19	13,058.92	12,351.07	15,413.90	18,047.05
Fossil energy materials/carriers	1,028.54	1,375.28	1,489.85	1,419.81	1,082.71
<b>Total</b>	<b>20,703.79</b>	<b>23,514.32</b>	<b>23,160.32</b>	<b>26,329.00</b>	<b>28,427.28</b>

**Fig.1 Structure of domestic extraction (DE)**



The total amount of imports of materials in 2016 was about 4 million tonnes, which is 3.04 % higher compared to 2015. The largest share hold the group of biomass with 1,369 thousand tonnes, followed by fossil energy materials with 891.12 thousand tonnes, non-metallic minerals with 770.37 thousand tonnes, metal ores and concentrates with 752.43 thousand tonnes and other products including imported waste with 282.17 thousand tonnes.

**Tab. 2 Imports of materials by category**

(000 tonnes)

Year	2012	2013	2014	2015	2016
Biomass and biomass products	1,143.00	1,179.41	1,242.29	1,233.87	1,369.55
Metal ores and concentrates	714.28	668.87	782.80	816.90	752.43
Non-metallic minerals	963.58	832.97	854.25	810.53	770.37
Fossil energy materials/carriers	918.75	984.13	872.13	818.00	891.12
Other products and waste imported	252.23	275.02	276.58	266.42	282.17
<b>Total</b>	<b>3,991.82</b>	<b>3,940.39</b>	<b>4,028.05</b>	<b>3,945.72</b>	<b>4,065.64</b>

Exports of materials in 2016 amounted to about 4 million tonnes, which is 6.72 % lower compared to 2015, mainly due to metal ores and fossil energy materials whose exports decreased by 7.66 % and 17.30 %. There was a slight increase of the exports of non-metallic minerals by 2.77 %.

**Tab. 3 Exports of materials by category**

(000 tonnes)

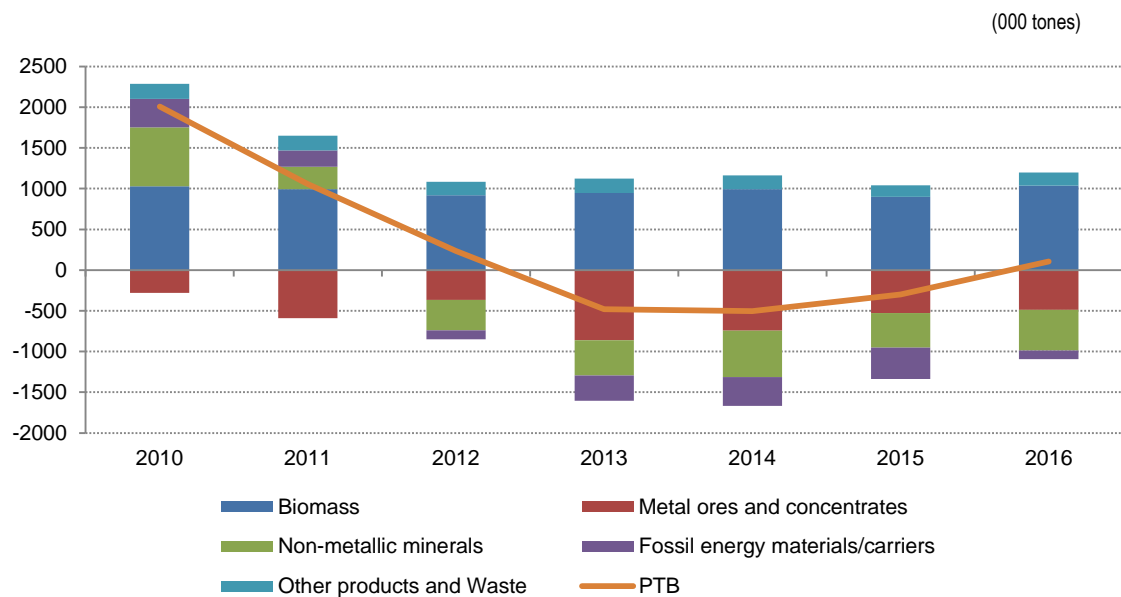
Year	2012	2013	2014	2015	2016
Biomass	223.41	233.62	248.16	333.31	331.20
Metal ores and concentrates	1,080.69	1,531.23	1,525.61	1,345.15	1,242.14
Non-metallic minerals	1,338.01	1,265.36	1,424.85	1,232.28	1,266.36
Fossil energy materials/carriers	1,027.25	1,291.83	1,225.92	1,205.87	997.20
Other products and waste exported	88.95	98.13	108.62	127.50	122.16
<b>Total</b>	<b>3,758.30</b>	<b>4,420.18</b>	<b>4,533.16</b>	<b>4,244.10</b>	<b>3,959.04</b>

The physical trade balance shows the difference between imports and exports for all material categories reaching 107 thousand tonnes for 2016, which is 135.73 % higher compared to 2015 where the imported quantity of materials was smaller than the quantity exported. The material group biomass and biomass products and other products including imported waste have a positive balance, while the group non-metallic minerals, metal ores and concentrates as well as the fossil energy materials have a negative balance for 2016.

**Tab.4 Physical trade balance (PTB)**

(000 tonnes)

Year	2012	2013	2014	2015	2016
<b>Physical trade balance</b>	<b>233.52</b>	<b>-479.78</b>	<b>-505.11</b>	<b>-298.38</b>	<b>106.60</b>
Import	3,991.82	3,940.39	4,028.05	3,945.72	4,065.64
Export	3,758.30	4,420.18	4,533.16	4,244.10	3,959.04

**Fig.2 Physical trade balance**

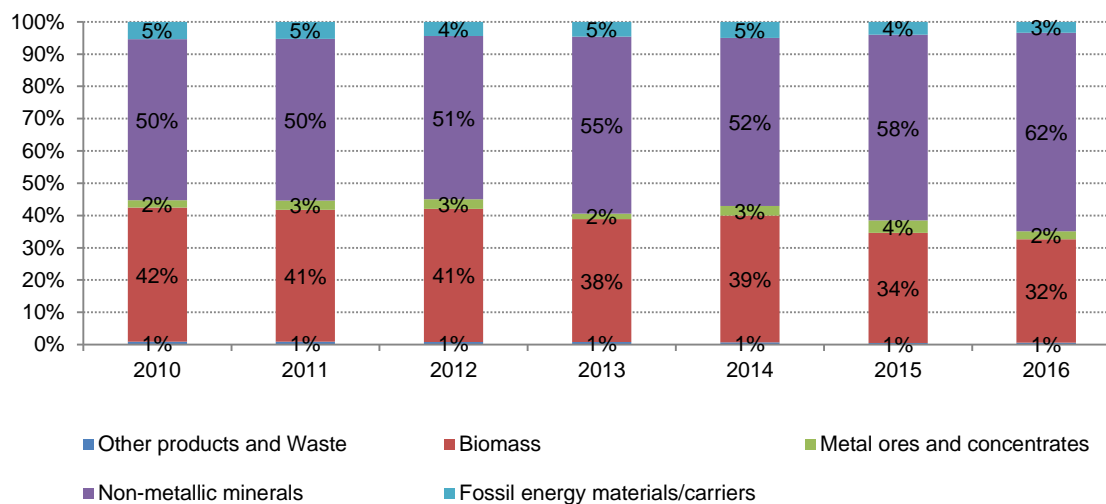
The domestic material consumption (DMC) measures the total amount of materials extracted and used from the environment, taking into account the physical balance of trade. In 2016 the DMC reached about 28.5 million tonnes, 9.62 % more compared to 2015. Domestic material consumption is dominated by non-metallic minerals reaching 61.51 % of the total, followed by biomass and biomass products with 32.09 %, fossil energy materials with 3.42 %, metal ores and concentrates with 2.42 % and other products including imported waste with 0.56 %.

**Tab.5 Domestic material consumption (DMC)**

(000 tonnes)

Year	2012	2013	2014	2015	2016
Biomass	8,646.58	8,782.11	8,876.66	8,867.15	9,155.86
Metal ores and concentrates	610.68	381.43	694.07	1,000.46	690.31
Non-metallic minerals	10,596.75	12,626.53	11,780.48	14,992.15	17,551.06
Fossil energy materials/carriers	920.03	1,067.58	1,136.06	1,031.94	976.63
Other products and waste	163.28	176.89	167.96	138.92	160.01
<b>Total</b>	<b>20,937.32</b>	<b>23,034.54</b>	<b>22,655.22</b>	<b>26,030.63</b>	<b>28,533.88</b>

Fig.3 Structure of Domestic material consumption (DMC)



The domestic material consumption per capita in 2016 was about 9.92 thousand tonnes, showing an increase of approximately 6.12 % compared to 2010, which amounted to about 7 thousand tonnes.

Tab.6 Domestic material consumption (DMC) per capita

Year	(000 tones)				
	2012	2013	2014	2015	2016
Biomass	2.98	3.03	3.07	3.08	3.18
Metal ores and concentrates	0.21	0.13	0.24	0.35	0.24
Non-metallic minerals	3.65	4.36	4.08	5.20	6.10
Fossil energy materials/carriers	0.32	0.37	0.39	0.36	0.34
Other products and waste	0.06	0.06	0.06	0.05	0.06
Total	7.22	7.96	7.84	9.04	9.92

# 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://www.instat.gov.al/al/rrethnesh/cilësi-statistikore.aspx/> Statistical revision policy.

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 consists 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.

**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) 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.