Instituto Nacional de Estadística

Press Release

11 December 2015

Material flow accounts. Base 2010.
2010 – 2013 accounting series

The domestic material consumption registers 393.4 million tonnes in 2013, 6.0% less than in 2012

The resource productivity of the Spanish economy increases 4.6% in 2013

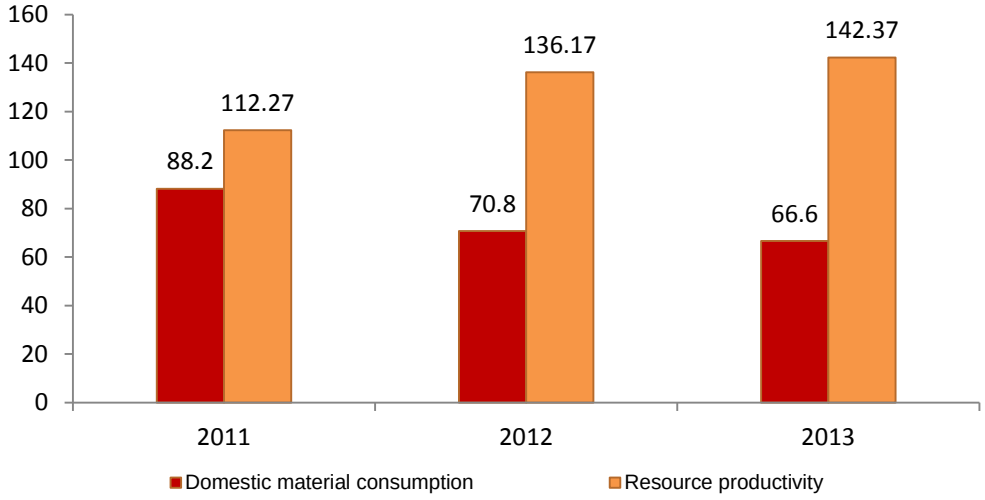
The domestic material consumption, a measure of the total quantity of materials directly used by the economy, reached 393.4 million tonnes in 2013, representing a decrease of 6.0% as compared with 2012 and of 33.4% as compared with 2010.

As for resource productivity (the amount of Gross Domestic Product created per domestic material consumption unit) there was a 4.6% growth in 2013. For 2010-2013 period there was a 42.4% increase.

In the 2010-2013 period, a gradual disconnection between the use of resources and economic growth had occurred.

Main indicators.

Indices. Reference year 2010=100



Components of the domestic material consumption

The domestic extraction of materials was the main component of domestic material consumption in 2013, with 315.2 million tonnes, which represented 80.1% of the total. Regarding the year 2012, there was a 4.1% decrease.

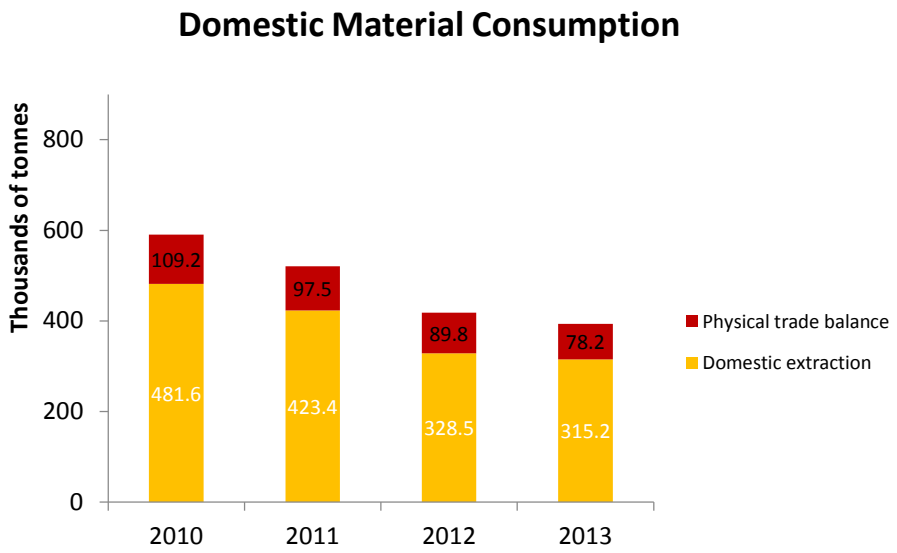
The physical trade balance, which is the physical trade surplus or deficit of an economy (imports - exports), was of 78.2 million tonnes in 2013 (representing 19.9% of the domestic material consumption). This figure represented a 12.9% decrease as compared with the previous year. In the 2010-2013 there was a 28.4% decrease.

Imports reached 228.9 million tonnes in 2013, as compared with the 150.8 millions in exports.

Domestic Material Consumption. 2010-2013 Series

Unit: thousands of tonnes

	2013	%interannual variation	%variation on 2010
Domestic extraction	**315,174.2**	**-4.1%**	**-34.6%**
Physical trade balance	**78,183.4**	**-12.9%**	**-28.4%**
Imports	228,940.7	-3.4%	-3.2%
Exports	150,757.3	2.4%	18.5%
Domestic material consumption	**393,357.6**	**-6.0%**	**-33.4%**



Domestic extraction of materials

The main materials extracted within the domestic territory in 2013 were non-metallic minerals and biomass with 171.6 and 132.6 million tonnes respectively.

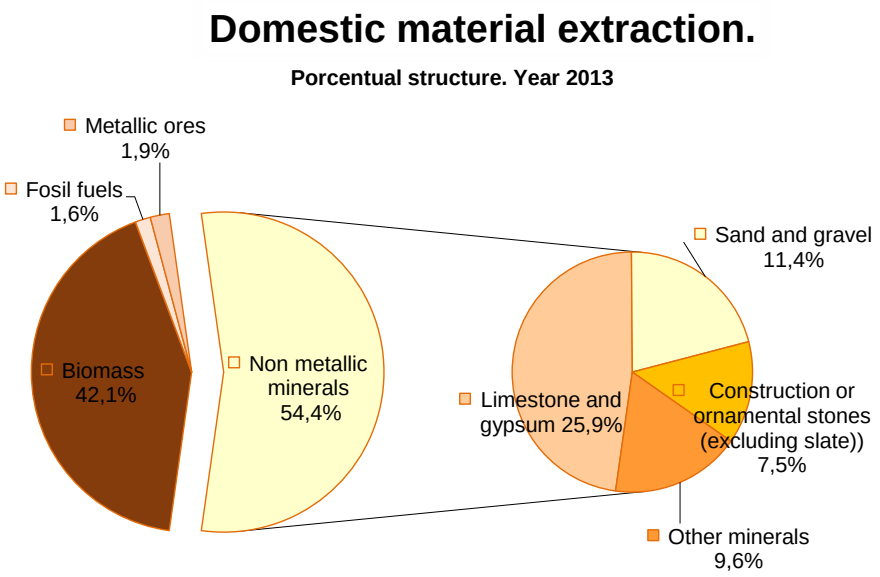
In the 2010-2013 period, biomass extraction increased 6.6% while the extraction of non-metallic minerals decreased 49.8%. Worth noting was the greater importance of biomass over the total extraction, reaching 42.1% in 2012.

In turn, the decrease of non-metallic minerals during this period, which represented 54.4% of total extractions in 2013, was due to the behaviour of limestone, gypsum, sand and gravel (68.7% of this kind of minerals).

Domestic Extraction in thousands of tonnes. 2010-2013 series

Unit: thousands of tonnes

	2013	%	%interannual variation	%variation on 2010
Domestic extraction	**315,174.2**	**100%**	**-4.1%**	**-34.6%**
Biomass	**132,591.6**	42.1%	**18.0%**	**6.6%**
Metales ores	**6,041.2**	1.9%	**24.9%**	**-10.9%**
Non metallic minerals	**171,639.3**	54.4%	**-16.2%**	**-49.8%**
Limestone and gypsum	81,802.3	25.9%	-15.9%	-51.7%
Sand and gravel	36,095.8	11.4%	-17.9%	-53.3%
Construction or ornamental stones (excluding slate)	23,751.5	7.5%	-22.8%	-53.3%
Chalk and dolomite	5,552.2	1.8%	-26.7%	-60.4%
Slate	969.5	0.3%	-3.3%	2.4%
Chemical and feritiser minerals	3,764.1	1.2%	-6.6%	2.0%
Salt	4,309.8	1.4%	4.9%	-3.2%
Clays and kaolin	9,519.6	3.0%	-5.5%	-31.2%
Other n.e.c	5,874.5	1.9%	-3.0%	-19.4%
Fossil energy carriers	**4,902.0**	1.6%	**-23.9%**	**-43.4%**



Physical trade balance

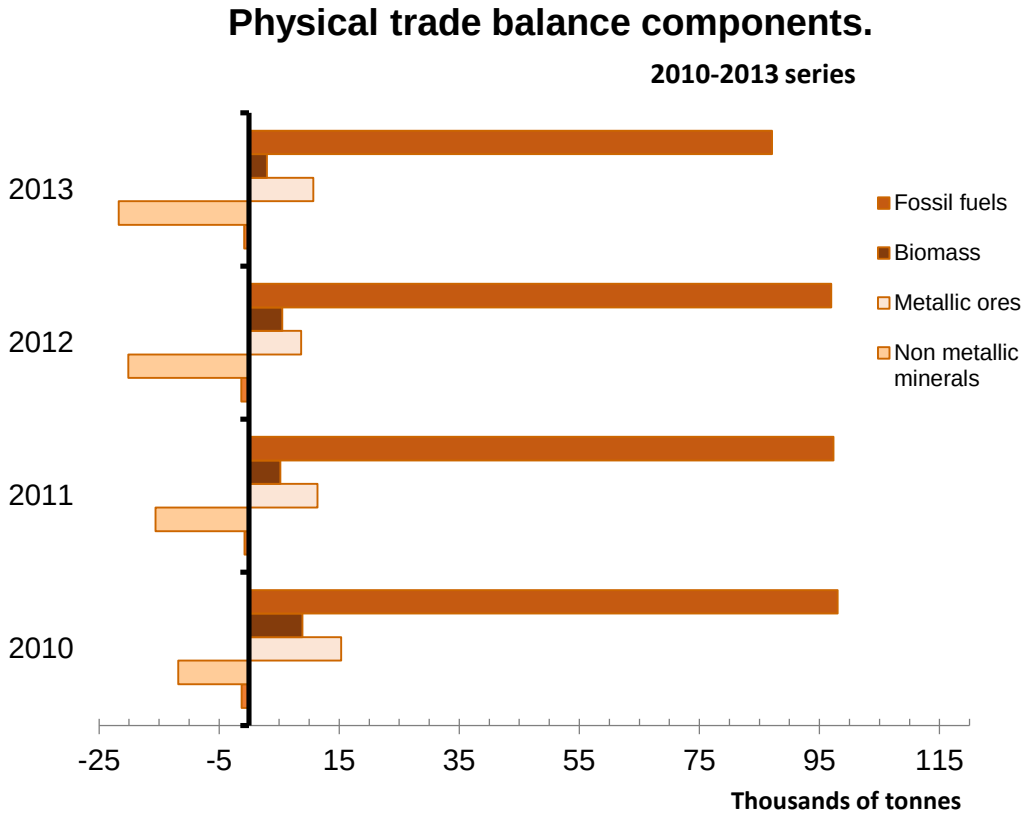
Fossil fuels were the material with the greatest weight in the physical trade balance in 2013, both in Imports (57.0%) and Exports (28.7%). Biomass stood right behind, with 18.3% and 25.9%, respectively.

As for Non-metallic minerals, Imports were 9,503.5 thousand tonnes and Exports, 31,241.5, resulting in a negative balance of 21,737.9 thousand tonnes for this type of material.

Components of the physical trade balance. Year 2013

Unit: thousands of tonnes

	Physical trade balance	Imports	%	Exportaciones	%
	78,183.4	**228,940.7**	**100.0%**	**150,757.3**	**100.0%**
Fossil fuels	87,109.4	130,434.1	57.0%	43,324.7	28.7%
Biomass	2,969.5	41,991.2	18.3%	39,021.7	25.9%
Metallic ores	10,692.3	36,493.2	15.9%	25,801.0	17.1%
Non metallic ores	-21,737.9	9,503.5	4.2%	31,241.5	20.7%
Other products	-849.8	10,518.6	4.6%	11,368.5	7.5%



Indicators derived from Material Flow Accounts

The main indicators derived from the Material Flow Accounts are Resource Productivity and Domestic material consumption per inhabitant.

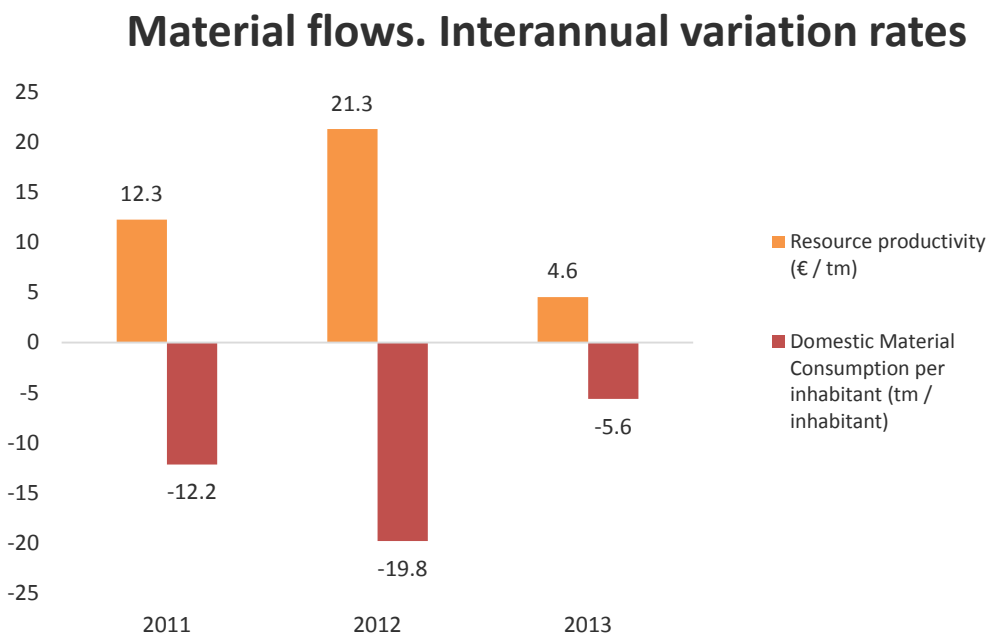
Resource Productivity refers to the quantity of GDP created per domestic material consumption unit, in euro per tonne. We use the ratio between GDP and domestic material consumption, which enables to understand the behaviour of the economy in relation to the environment.

In 2013, resource productivity reached 2,604.9 euros per tonne, with a 4.6% increase as compared with the previous year. In the 2010-2013 period, the resource productivity increased by 42.4%.

The **Domestic consumption of materials per inhabitant** may be observed by relating the domestic material consumption with the size of the population. The average consumption of materials decreased by 8.4 tonnes per inhabitant in 2013, 5.6% less than in the previous year. In the 2010-2013 period, there was a 33.5% decrease.

Material flow indicators. 2010-2013 series

		2013	%interannual variation	%variation on 2010
Resources productivity	(€ / tm)	2,604.9	4.6%	42.4%
Domestic Material Consumption (DMC)	(tm / inhabitant)	8.4	-5.6%	-33.5%



Methodological note

The National Statistics Institute presents today the estimates corresponding to 2010-2012 of the Material flows accounts in the new 2010 base.

The ***Environmental Accounts*** (EA) are a synthesis statistical option with the general objective of integrating environmental information coherently in the central system of National Accounts, following the methodology of the United Nations System of Integrated Environmental and Economic Accounting (UNSD), which constitutes the conceptual framework of the EA.

The European Parliament and Council Regulation (EU) No. 691/2011, of 6 July 2012, regarding the European economic environmental accounts, constitutes the frame of reference of concepts, definitions, classifications and common accounting standards for the compilation of the Environmental Accounts and for the first time includes a module of such accounts for their annual dissemination.

Material Flow Accounts reflect the physical inputs of materials that enter the national economic system in physical units (tonnes). These accounts provide a set of aggregate indicators on the use of natural resources for which indicators can be derived on the productivity of resources (eco-efficiency) in relation to GDP and other economic and employment indicators, in addition to indicators on the intensity of materials in lifestyles, considering the size of the population and other demographic indicators.

There is usually an increase of the need of materials, such as the ones for construction and energy resources, which is linked to the growth of the economy. A more rational use of natural resources provides a greater economic value to each used unit and thus the growth rate of the use of resources may be lower than the economic growth rate. When this happens, it is said that a ***decoupling takes place between the use of materials and economic growth***.

One of the main goals of the EU is to achieve a decoupling between economic growth and environmental degradation. An efficient use of resources constitutes one of the flagship initiatives of the Europe 2020 strategy.

Main definitions:

- *Domestic extraction* is the annual quantity of solid, liquid and gaseous materials (excluding air and water) that are extracted from the natural environment to be used as inputs in the economy.

- *Physical imports and exports* include all goods imported or exported, in mass units. Goods exchanged include assets in all transformation stages, from basic products to finished products.

- *Direct material input* the direct input of materials in the economic system, from the natural environment of the country and of the rest of the world, that is, domestic extraction and imports, is registered as resource.

- *Domestic material consumption* is obtained by deducting exports from the Direct Material Input indicator.

- *Resource productivity* is defined as the amount of GDP created per unit of domestic material consumption (euros per tonne).

The INE website http://www.ine.es shows the complete published methodology of the operation.