

## Material Flow Accounts

1995-2016

### **Domestic Material Consumption decreased 1.7% in 2016, despite the growth of 1.5% of GDP**

Domestic Material Consumption decreased by 1.7% in 2016, despite a GDP increase of 1.5% in real terms. This evolution resulted in an increase in productivity associated with the use of materials in 2016 (+3.3%), reinforcing an increasing trend of dematerialization, which began in 2009, resulting in a more efficient use of materials extracted from the environment. The decrease in consumption of materials in the context of economic growth (decoupling) had not been observed since 2010.

In the same year, Portugal recorded a domestic material consumption *per capita* of 14.8 tons, approaching the European average (13.0 tons), with an improvement in the relative position in the EU28 ranking (from the 21<sup>st</sup> country with the lowest consumption in 2000 to the 17<sup>th</sup> in 2016).

Statistics Portugal publishes the provisional results of Material Flows Accounts (MFA) for the year 2016, presenting revisions for the retrospective series, following the update of several data sources.

MFA aims to express, in terms of material flows, the interaction of the national economy with the natural environment and the rest of the world economy, in order to evaluate if economic growth is achieved through a more efficient use of materials taken from the environment (dematerialization) or a more intense use of materials.

In Statistics Portugal website, in the National Accounts dissemination area (Satellite Accounts section), additional tables with more detailed information are also available.

#### **1. Analysis of the main indicators**

Domestic Material Consumption (DMC)<sup>1</sup> decreased by 1.7% in 2016. This evolution, in contrast with the dynamics of economic activity in Portugal (Gross Domestic Product - GDP grew 1.5% in volume) is explained, among other factors, by the decrease in activity sectors with more intensive use of materials, namely Construction (whose Gross Value Added - GVA decreased by 1.7% over 2015).

The decrease in the domestic consumption of materials in 2016 was mainly due to the lower consumption of metallic ore, non-metallic minerals and fossil energy materials, which offset the increases in biomass consumption (related to the production of pulp and paper), waste and other products.

<sup>1</sup> This indicator is part of the list of indicators for sustainable development objectives (indicator 8.4.2). For more information consult the thematic dossier available at: [https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine\\_perfsgd&xlang=en](https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_perfsgd&xlang=en).

Resource productivity (GDP / DMC) increased by 3.3% in 2016, continuing an upwards trend observed since 2009, only interrupted in 2014.

## 2. International comparisons<sup>2</sup>

In 2016, Portugal had a DMC of 14.8 tons *per capita* (19.5 in 2000), approaching the European average (13.0 tons *per capita* in 2016 and 15.6 in 2000).

Portugal noted an improvement in the relative position (21<sup>st</sup> country with the lowest DMC *per capita* in 2000 to the 17<sup>th</sup> in 2016).

Chart 2.1. Domestic Material Consumption (DMC) *per capita*, in EU28, in 2000 and 2016

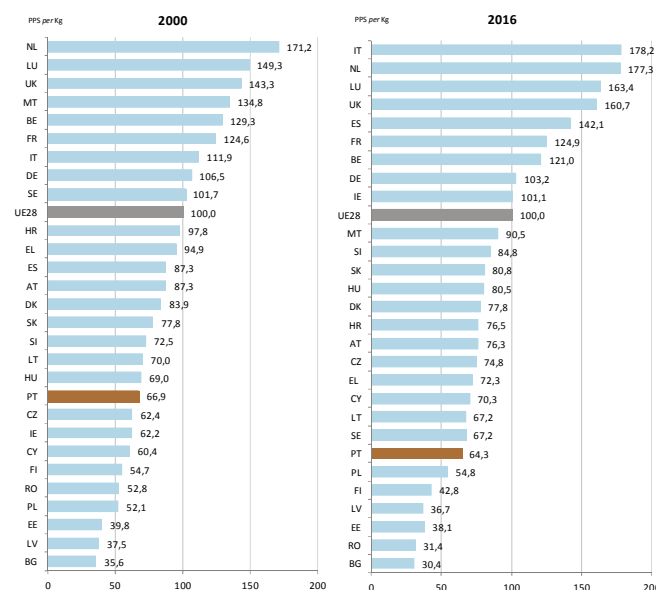


Confronting the positioning of Portugal in terms of DMC *per capita* and GDP *per capita* (in Purchasing power standard - PPS) it is possible to observe that in 2016 Portugal presented a higher DMC than the European

average (+19.7%), as opposed to GDP *per capita*, which was lower by 22.8%.

With regard to resource productivity (GDP in PPS / DMC), in 2016 Portugal presented data below the European average (64.3% of the average EU28), a result lower than the observed in 2000 (66.9% of the EU28 average). Portugal went from 19<sup>th</sup> to 22<sup>nd</sup> in the ranking of resource productivity. Indeed, despite the improvement in resource productivity observed in Portugal since 2009, this improvement was lower than on average in the countries of the European Union.

Chart 2.2. Resource productivity (GDP in PPS/DMC), in EU28, in 2000 and 2016



This is partly due to the structural differences between the national economy and the other European economies, since the Portuguese industry is still supported in several material-intensive sectors such as construction, pulp and paper, refinery and non-metallic mineral products (cement and ceramics), steel and metal products.

<sup>2</sup> The information from the Member States (except Portugal) was extracted from Eurostat database on 6 December 2017. Data for Portugal have been updated with the new MFA series now available.