

## INDICATORS OF MATERIALS FLOWS

RES 1

Quantifying the environmental pressures linked to the production and consumption patterns of goods and services can be understood by analysing the flows of materials extracted from natural resources (internal and external to Wallonia). Each Member State of the European Union has been required to carry out this analysis since December 2013.

Significant materials flows<sup>1</sup>

In 2013, the direct material input (DMI)<sup>2</sup> of Wallonia was estimated at 116 Mt, or 32.7 t per capita. This value was higher than the average for Belgium (30.6 t per capita)<sup>3</sup> and the EU-28 (14.3 t per capita)<sup>3</sup>. Non-metallic minerals (NMMs) and biomass make up, on average, about 85% of material inputs each year. The majority of NMMs (sand, gravel, ornamental stones, etc.) reflects the richness of the Walloon subsoil, which is the basis for the activity of the extractive industry and downstream sectors (cement works, glass industry, construction sector, etc.). Wallonia's domestic material consumption (DMC)<sup>4</sup> amounted to 73 Mt in 2013, or 20.6 t per capita, a higher level than that of Belgium (13.6 t per capita)<sup>3</sup> and the EU-28 (13.0 t per capita)<sup>3</sup>.

## Invisible environmental pressures

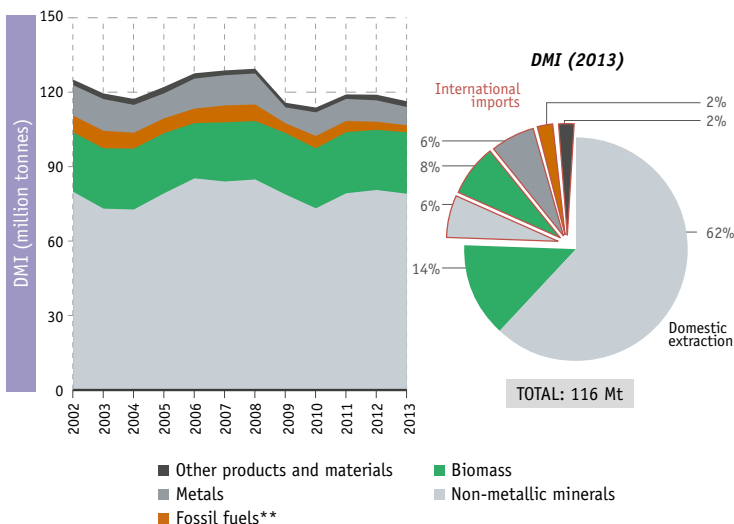
Indirect flows can be linked to each of the visible material flows. These flows correspond to the raw materials involved in the life cycle of a product, but which are not physically imported or exported. Accounting for these flows brings the Walloon DMI to 165 Mt and the DMC to 133 Mt.

Slight decrease in regional material intensity<sup>5</sup>

The DMI and DMC decreased by about 7% between 2002 and 2013. The decrease in the DMI is mainly linked to (i) a more efficient use of NMMs and (ii) a decrease in imports (despite their small proportion in the DMI: 26% on average between 2002 and 2013) and more particularly metal imports (-40%), following the slowdown in the Walloon steel sector. The evolution of the DMC is linked to that of the DMI. The decoupling observed over the period 2002-2013 between the DMI and the DMC on the one hand, and the gross domestic product on the other, testifies to (i) the growth of the tertiary sector and high value-added industrial production, which are less material-intensive activities, and (ii) the crisis in the steel sector following the economic crisis of 2009.

<sup>[1]</sup> ICEDD & VITO, 2015 (excluding interregional flows) | <sup>[2]</sup> Materials extracted and imported into the territory to power the economy | <sup>[3]</sup> <http://ec.europa.eu/eurostat> | <sup>[4]</sup> Materials consumed by the population of the territory to satisfy its own needs | <sup>[5]</sup> Quantity of materials consumed per unit of value added produced

**Fig.RES 1-1** Direct material input of the Walloon economy\* (DMI = domestic extraction + international imports)



\* Excluding interregional flows \*\* Excluding natural gas

**Fig.RES 1-2** Use of materials\* and wealth creation in Wallonia

