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REGION CASE STUDY

COUNTRY	REGION	POPULATION	MATERIAL FOOTPRINT	MATERIAL FOOTPRINT REDUCTION TARGET
BELGIUM	FLANDERS	6,600,000	29.1 TONNES /INHABITANT (2018)	-30% BY 2030; -75% BY 2050

## In Flanders, the development of a comprehensive strategy for the bioeconomy

The material footprint of Flanders is [29.1 tonnes per inhabitant](#); the UNEP International Resource Panel estimates that the overall material footprint would be sustainable at 7 t/capita. In its [Climate and Energy Plan 2021-2030](#), Flanders wants to reduce this footprint by 30% in 2030 and 75% in 2050. To achieve this, Flanders intends to become one of the main bio-economic regions in Europe by 2030, an economic model for the production of biological resources (biomass, agricultural products, fisheries resources, etc.) in proportions that allow for their renewal, use and residual flows. In order to bring the local actors together to work on achieving this objective, Flanders has developed its multi-stakeholder governance around R&D.

### At the outset of the Flemish vision for a sustainable and competitive bioeconomy in 2030

In Belgium, the bioeconomy is the responsibility of the regional authorities, so there is no national bioeconomy strategy. As early as 2013, the Flemish government adopted a [regional strategy for the bioeconomy](#) aimed at developing a sustainable and competitive bioeconomy in 2030, before it became a cross-cutting theme of the Smart Specialisation Strategy (S3) in the fields of sustainable chemistry, advanced materials, agri-food, energy, environment and clean technologies. Then in March 2016, the circular economy, which includes the bioeconomy, became one of the seven transition priorities identified by the government in its [Vision 2050](#).

In order to develop the circular economy, "[Circular Flanders](#)" was created in January 2017 and entrusted to the Public Waste Agency of Flanders (OVAM). It is a partnership bringing together government agencies, companies (Agoria in the manufacturing, digital and telecom sectors, etc.) and professional federations (Fedustria for the textile, wood and furniture industries, Fevia for the Belgian food industry, Febelfin for the financial sector, etc.), members from civil society and research centres (VITO, VIB, etc.). The Circular Economy Policy Research Centre (CE Center) is [responsible](#) for producing

a [monitoring and evaluation system](#) for the circular economy by the end of 2020.

### 2020, a year of circular change

In July 2020, a new cross-cutting governance structure was created to link the circular economy to all policy areas of the Flemish government, and to create a roadmap through interdepartmental collaboration involving research centres, clusters, federations, and pilot infrastructures. New thematic work programmes are added to the existing Circular Flanders, one of which is on the bioeconomy, coordinated by the Department of Economy, Science and Innovation (EWI), in collaboration with the Department of Agriculture and Fisheries.

The bioeconomy agenda is based on 4 pillars: 1) a research agenda; 2) economic development; 3) innovative collaborations between industry, primary producers and intermediaries; 4) support to and alignment of policy actions. Pillar 3 must ensure that farmers are interested in creating new value chains and are willing to cooperate with industry. Pillar 4 involves the coordination of the EWI to develop cross-cutting skills and competences. The programme covers new themes such as non-food biomass production, industrial biotechnology applications and the marine economy. In 2021, the Flemish government also approved a new biomass policy plan, which covers waste prevention (food waste pre-

vention, eco-design, reuse) and the more traditional applications of biomass in the bioeconomy (wood processing, composting, digestion, animal feed, novel foods, etc.). The bioeconomy agenda and the biomass policy plan are complementary, with each reinforcing the other.

### The bioeconomy, a priority in the transition to the circular economy

To develop the bioeconomy, Flanders can count on industrial clusters in the chemical (Catalisti), agri-food (FF Flanders' Food), biotechnology (VIB) or marine economy (Blue Cluster) sectors. It also has large universities with strong R&D capacities. The government strongly supports the sector through grants and subsidies, in addition to an R&D-friendly tax system: [2.89%](#) of Flanders' GDP is spent on R&D investments, compared to a European average of 2%.

The region has three pilot plants: LignoValue to produce "bioaromates" from lignin wood, Food Pilot for food and Bio Base Europe for biobased products. These projects stimulate innovation in the bioeconomy and enable the transition from laboratory and semi-industrial trials to feasible commercial or industrial innovations.