

**W**aste generation is rising globally. People and businesses in the European Union alone produce more than **2 billion tonnes of waste per year**, or 4.8 tonnes per capita, primarily from construction, mining and industry. On average, each person in Europe produces **half a tonne of municipal waste a year**, of which less than half is recycled. This waste has negative effects on our environment, biodiversity and health, and is costly to manage. It also shows that we are not using the Earth's finite resources efficiently.

The world population consumes over **100 billion tonnes of materials every year** and over 90% of all materials extracted and used are wasted. The circular economy aims to fix this by eliminating waste altogether. This can be achieved by extending the life and use of resources, materials and products, by rethinking and redesigning products and business processes, by developing innovative solutions and service models and by encouraging more sustainable consumption patterns. If we do this, we will reduce material and energy consumption, waste generation and emission of greenhouse gases. The European Investment Bank (EIB) supports the transition to a circular economy with three mutually reinforcing activities: **finance, advisory support** and **awareness-raising**.

From 2018 to 2022, the EIB provided **€3.4 billion** to co-finance **118 circular economy projects** in a variety of sectors. We stand ready to do more. Circular economy projects with a higher risk profile have received financing through our risk-sharing instruments benefiting from EU guarantees.

In addition to capital, the Bank provides financial and technical advisory support to improve the bankability and investment-readiness of circular economy projects.

Finally, awareness-raising and partnerships are key to enabling the transition to a circular economy.

In 2020, the European Commission adopted the **circular economy action plan**, a main building block of the **European Green Deal**, which aims to make the European Union climate neutral by 2050. The action plan introduced specific measures to promote a circular economy, including making sustainable products the norm in the European Union and focusing on sectors that use the most resources — and where the potential for circularity is high — such as electronics and information technology, batteries and vehicles, packaging, plastics, textiles, construction and buildings, food, water and nutrients.

In 2019, the EIB launched the **Joint Initiative on Circular Economy** together with the European Union's largest national promotional banks and institutions, with the goal of **investing at least €10 billion in the circular economy by the end of 2023**. Together with the European Investment Advisory Hub we also launched the **Circular City Funding Guide** website and the **Circular City Centre (C3)**, a competence and resource centre within the EIB that aims to support EU cities in their circular economy transition. The C3 is now being deployed with support from the European Commission.



## FACTS AND FIGURES

A circular economy conserves resources, reduces our impact on the climate and the environment, fosters sustainable economic growth, generates new jobs and can help secure the supply of critical materials.

About 45% of global greenhouse gas emissions come from product use and manufacturing, along with food production. Applying circular economy strategies in just five key areas (cement, aluminium, steel, plastics and food) could eliminate almost [half of global greenhouse gas emissions from the production of goods](#) — 9.3 billion tonnes of CO<sub>2</sub> equivalent in 2050. That is equivalent to cutting current emissions from all transport to zero.

Circular economy interventions can also [halt global biodiversity loss](#) and help the world's biodiversity recover by 2035 to the same levels as in 2000. By reducing pollution in the air, water and soil, a circular economy also helps protect our health.

And moving to a circular model can benefit businesses. By redesigning business models, production processes and products, circular businesses can significantly reduce their material, energy and waste management costs, resulting in higher yields and competitive advantages.

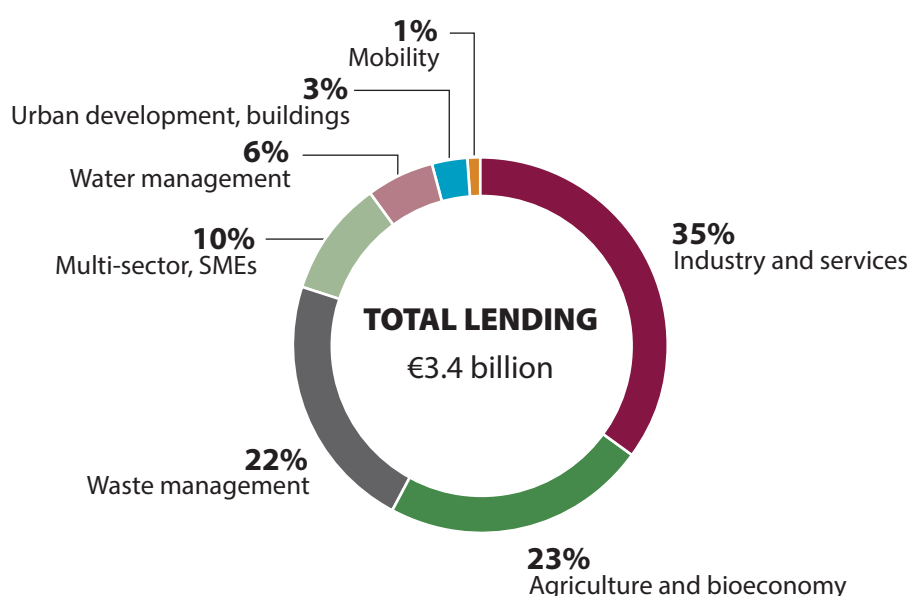
Additionally, the International Labour Organization estimates that transitioning to a circular economy could [increase global employment by 7-8 million jobs by 2030](#).

Yet today, [less than 10% of global economic activity is circular](#).

By launching its [Climate Bank Roadmap](#), the EIB has committed to aligning all its new operations with the goals and principles of the Paris Agreement, and to supporting €1 trillion of climate action and environmental sustainability investments in the decade to 2030.

The EIB's support for the circular economy covers various sectors, including agriculture and bioeconomy, industry and services, mobility, small and medium-sized enterprises, urban development, waste management and water management.

## EIB CIRCULAR ECONOMY LENDING BY SECTOR 2018-2022





De Verspillingsfabriek in the Netherlands transforms discarded and surplus food into fresh new products.

## PROJECT HIGHLIGHTS

Circular economy projects use a variety of strategies to preserve the materials, energy and labour invested in products. From recycling to redesigning processes to reuse, remanufacture or repair products, circular solutions can be implemented in any sector. Below are some examples of EIB-supported projects and initiatives for a more sustainable economy:

### Making new fabric from old clothes in Sweden

The Sweden-based fashion innovator Renewcell has devised a way of turning discarded clothing into Circulose®, a pulp that can be made into new fabric. Renewcell will use a €30 million EIB loan to build their first full commercial-scale textile recycling plant that shreds old clothes and transforms them into new threads.

[More information online](#)

### Promoting circular solutions for plastics

A €250 million EIB loan is supporting a multi-year investment programme by the polyolefins solutions provider Borealis in the area of plastics circularity. Polyolefins are plastics used in a wide range of applications in consumer products, packaging, power transmission cabling, and industrial and construction materials. The EIB loan has enabled Borealis to intensify work on new polyolefins-based circular solutions at its innovation centres in Austria, Sweden and Finland.

[More information online](#)

### An equity fund devoted to circular bioeconomy

The EIB invested €65 million in the European Circular Bioeconomy Fund, the first equity fund devoted exclusively to the bioeconomy and the circular bioeconomy in the European Union and Horizon 2020 countries. It aims to provide financing to innovative growth-stage companies and projects. In October 2020, it made its first investments in PeelPioneers, a Dutch company that creates value from food waste streams, and Prolupin, a developer of plant-based protein and dairy alternatives.

[More information online](#)

### Recycling scrap titanium in France

A €30 million EIB loan supported the construction of the first EU industrial plant for recycling and remelting aviation-grade scrap titanium metal and titanium alloys. This will reduce dependence on imported titanium (a raw material used in many products) and prevent the emission of 100 000 tonnes of carbon dioxide a year. The plant will also cater for the strong growth in titanium demand in the aeronautics market and strengthen metallurgical skills within the employment hub of Combrailles in the Auvergne-Rhône-Alpes Region in France.

[More information online](#)





## Turning recycled wood into Italian furniture

Saviola Holding is an Italian company that participates in the circular economy by making chipboards and furniture out of recycled wood. Crates, pallets, discarded furniture and garden clippings enter Saviola's premises to be cleaned, broken down and pressed into new, 100% recycled wood panels. Each year, the company collects and processes enough old wood to fill the Colosseum 30 times over, and its products save almost 3 million trees each year — enough to forest an area the size of Rome. The EIB granted Saviola a €115 million loan to invest in making production more environmentally friendly and energy efficient. To help make the most of the loan, EIB experts and external consultants analysed the emissions inventory of the company's production systems and supply chain and advised it on setting targets to reduce emissions in the medium and long term.

[More information online](#)

## Software and hardware to help reduce food waste in Romania

The Romanian food waste management company Winnow will use a €7.5 million EIB loan to develop software and hardware solutions to help staff in professional kitchens track the types and amounts of food wasted. The ultimate aim is to provide kitchens with data they can use to prevent food waste.

[More information online](#)



Winnow develops software and hardware solutions to reduce food waste in professional kitchens.

## Masonry blocks that consume carbon

Cement production is the source of 2.4% of global carbon dioxide emissions from industrial and energy sources. Four Belgian companies are working together to develop an innovative masonry block made with carbon dioxide gathered from other industrial processes. The product could have significant implications for industry across the globe, and for the battle against global warming. The companies put the cost of developing the block at €7.5 million and requested backing and advice from the Innovation Fund, a European Commission funding programme for innovative, low-carbon technologies. The project received support from experts on the EIB's Innovation Fund team. The European Climate, Infrastructure and Environment Executive Agency pre-selected the project for a grant of €4 million (60% of the capital expenditure for process development) under an Innovation Fund call for small projects.

[More information online](#)

## Saving water under the shower

Orbital Systems, an innovative early-stage company in Sweden, has developed a water-saving shower solution for use in homes, vehicles and hotels, which can save up to 90% of the water and 80% of the energy used by conventional showers. Water that would normally go down the drain is cleaned and reused in the same shower cycle. The EIB supported Orbital with a €15 million loan to develop and market its products on a large scale.

[More information online](#)



Executives of the four companies that make CO2ncreAT, innovative masonry blocks that use by-products of steelmaking, with their product.



# RESOURCES

## WEBSITES

- [The EIB in the circular economy](#)
- [The Circular City Funding Guide](#)
- [The Circular City Centre \(C3\)](#)

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## PUBLICATIONS

- [The EIB Circular Economy Guide](#)
- [Cutting plastics pollution](#)
- [The 15 circular steps for cities](#)
- [A Guide for Developing a Circular City Strategy](#)
- [A catalogue of circular city actions and solutions](#)
- [A guide for circularity in the urban built environment](#)
- [Joint Initiative on Circular Economy](#)
- [The virtuous circle](#)
- [Access-to-finance conditions for projects supporting circular economy](#)
- [Access-to-finance conditions for investments in bio-based industries and the blue economy](#)

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## BLOGS

- [Automating solid waste treatment](#)
- [Where can I throw this?](#)
- [Add to green cart](#)
- [The Swedish space shower](#)
- [Titanium recycling gives Europe a valuable new metal supply](#)

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## PODCAST

- [Converting waste to taste](#)

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## VIDEOS

- [Making circularity part of everything we do](#)
- [Letting our oceans breathe](#)
- [Greening the fashion industry with Renewcell](#)
- [Jujuy waste-pickers stories](#)



Rosa, who picked waste for 30 years from a landfill in Argentina, is now a seamstress recycling textiles as part of a project financed by the EIB.

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This overview, with links to stories, brochures and videos, is available at:

[www.eib.org/circular-economy](http://www.eib.org/circular-economy)