

# The bio-based industries - key to the EU's green recovery

BIC position paper  
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Bio-based Industries  
Consortium

# The bio-based industries

*“By using the European Green Deal as our compass, we can turn the crisis of this pandemic into an opportunity to rebuild our economies differently and make them more resilient”*

President of the European Commission Ursula von der Leyen

## **The Bio-based Industries**

A strong European bio-based sector offers Europe and its citizens an opportunity to accelerate the economic recovery and the transition towards climate neutrality and healthy ecosystems.

This position paper shows the immediate and the mid to long-term impacts of the bio-based industries towards a green recovery. Our sector positively contributes to environmental, economic and social challenges by sustainably using domestic renewable feedstock from agriculture, forestry and fisheries as well as residues, bio-waste and recycled carbon emissions, and process it in state-of-the-art biorefineries to provide bio-based solutions for our customers and consumers.

The Bio-based Industries Consortium (BIC) continues to cooperate and to integrate strategic partners to lift the full potential of the bioeconomy. [Together with 15 associations](#) representing sectors across the bio-based value chain we have agreed on the joint Vision “[The circular bio-society in 2050](#)”. We are now turning the Vision into a [Strategic Innovation and Research Agenda \(SIRA\) 2030](#), which will be the basis for the proposed public-private partnership “Circular Bio-based Europe”. The green recovery will be at the core of the SIRA.

# Our key messages

## 1. Bio-based industries accelerate the economic recovery

With about 700 billion EUR turnover and 3.6 million people employed, the bio-based industries are helping to alleviate the impact of the crisis by keeping essential services running and maintaining green jobs. BIC members reacted quickly and effectively to assist governments and health authorities to combat the COVID-19 pandemic. This included the provision of much-needed supplies such as food and feed ingredients, (compostable) packaging, hand sanitisers, masks, tissues and energy from renewable feedstock.

## 2. Bio-based industries are key for realising the EU's Green Deal

The advantage of the bioeconomy lies in the fact that through integrated and innovative circular operations food, feed, bio-based products and materials, services and energy can be produced. The bio-based industries help to reduce Europe's dependency on fossil-based resources, sustain healthy ecosystems and achieve the climate neutrality goal. We help to improve food security, foster circularity, stimulate rural development and maintain green jobs in EU regions.

## 3. Bio-based industries transform the way sectors and society work

Creating bio-based value chains requires new connections and innovations across multiple and diverse sectors. It also requires involving brand owners' and citizens' insights to achieve market up-take and acceptance. That is the uniqueness and the challenge of the European bio-based sector. The bio-based industries integrate 'traditional' industrial sectors including the primary sector into innovative value chains in making the European bioeconomy the global leader.

## **BIC: Looking ahead**

For “rebuilding our economies differently and make them more resilient” we don’t need to start from scratch. We can build up on the [positive impacts](#) of the Bio-based Industries Joint Undertaking (BBI JU).

More actions need to be taken to make Europe benefiting and having our industry fully deploying its potential for a green recovery, in particular:

- Realising an institutional private-public partnership ‘Circular Bio-based Europe’ under Horizon Europe
- Better recognising the importance of the bioeconomy in the European Green Deal and fully implementing the EU Bioeconomy Strategy.
- A more coherent EU regulatory framework bringing bio-based and bioprocessing solutions to the market faster and creating more financial synergies to fund bio-based and bioprocessing projects.
- A more holistic view of the concept of circular economy: going beyond material recycling, avoiding a ‘silo approach’, and instead designing production and processes through the creation of interlinks among different sectors: agriculture, aquatic, forestry, materials, chemicals, energy, etc.
- The new EU Circular Economy Action Plan, the EU Industrial Strategy, the EU Biodiversity Strategy and the EU Farm to Fork Strategy should offer a coherent policy approach, by defining the framework conditions for a sustainable bioeconomy, improving the access to recyclable and bio-based products and developing a product policy that encourages the use of sustainable and innovative bio-based solutions.

### **The Bio-based Industries Consortium (BIC)**

The Bio-based Industries Consortium (BIC) is Europe’s leading industry organisation, putting circularity, innovation and sustainability at the heart of the European bioeconomy.

BIC has more than 240 industry members (of which approximately 80% are SMEs), and over 200 associate members (academia, research organisations, trade associations, etc.). The common element that unites our membership is the belief that new connections and

innovations across different industries and disciplines are needed to create innovative circular bio-based value chains.

BIC is the private partner in a public-private partnership with the EU Commission - the Bio-based Industries Joint Undertaking (BBI JU).

BIC's mission is to build new circular bio-based value chains as well as to create favourable business and policy climate to accelerate market uptake of bio-based solutions.

More information about BIC can be consulted on our website and in our brochure [here](#)

## **BIC key messages: Examples and further information**

### **1. Bio-based industries accelerate the economic recovery**

#### **Contribution to EU turnover**

The bioeconomy including the food and beverage and primary sectors stimulates green growth by contributing 2.3 trillion EUR to the EU economy. With about 700 billion EUR turnover and 3.6 million people employed, the bio-based industries are a major sector within bioeconomy.

Examples and/or further information (please click link):

- [nova-Institute report 2019](#)
- JRC report "[How big is the bioeconomy](#)"

#### **Bio-based solutions to COVID-19 pandemic**

The bio-based industries have reacted quickly and effectively to assist governments and health authorities to combat the COVID-19 pandemic by shifting production and maintaining a steady supply of essential products.

Examples and/or further information (please click link):

- Circa Levoglucosenone, in partnership with Norske Skog, for treatment: [PaperFirst](#)

- Total Corbion donating Luminy PLA resins for the production of 3D printed medical devices and protective equipment: [Bioplastics magazine](#)
- Clariant started producing 2m litres of disinfectant per month to help: [Clariant](#)
- Unilever and Evonik partner to launch green cleaning ingredient: [Unilever](#)
- Leitat developing 3D printed ventilators: [BBI JU news](#)

### **Bio-based value chains are resilient and well-placed to boost Europe's post COVID-19 economic recovery**

A bioeconomy based on locally sourced biomass can effectively reduce uncertainty related to supply chains and provide much sought stability to industrial value chains, a key factor for Europe's reindustrialisation and a key contribution towards Europe's post COVID-19 green recovery.

[Examples and/or further information \(please click link\):](#)

All projects funded under the BBI JU have to source domestic biomass. An overview of BBI JU projects can be found [here](#).

### **Positive impact from investment projects**

The bio-based industries are investing into biorefineries (projects) that develop new, innovative bio-based solutions that stimulate green growth, especially in rural, coastal and catching up regions. Of the nine flagships realised under the BBI JU, three are in the EU13 (Estonia, Romania, Slovakia) and one project in an associated country (Norway).

[Examples and/or further information \(please click link\):](#)

- BBI JU flagship projects: [LIGNOFLAG](#), [SWEETWOODS](#), [EXVILA](#), [First2Run](#)
- Lanzatech [project](#) partner to decarbonize steel production
- Metsä Group's investment projects in Finland and Sweden progress – the world's most modern sawmill (see [here](#))

### **Driving new innovative processes and products by involving SMEs**

Small and medium-sized enterprises (SMEs) are key enablers for new bio-based products and processes by providing knowledge and technologies that contribute to green growth. Around

80% of BIC industry members are SMEs, many of which represent additional SMEs in clusters. SMEs lead and/or cooperate with large enterprises and other stakeholders in R&I projects. The SME participation/funding (%) in BBI JU projects is higher than in HorizonEurope projects. An overview of our membership can be found [here](#).

## 2.. Bio-based industries are key for realising the EU's Green Deal

### Contributions of bio-based projects to UN Sustainable Development Goals (SDGs)

The circular bioeconomy can hugely contribute to the UN Sustainable Development Goals (SDGs) if managed sustainably and policy coherence is achieved. The bioeconomy and the bio-based industries already have a positive impact to the SDGs, in particular SDG 2, 3, 6, 7, 8, 9, 11, 12, 13, 14 and 15.

BIC currently works on developing guidelines and toolbox to better quantify the contribution of bio-based projects to the SDGs.

Examples and/or further information (please click link):

- [Bio-Based Industries to support the SDGs under HORIZON EUROPE](#)
- [UN Paper on SDGs and bioeconomy](#)
- EUBA on "[Crucial role of the bioeconomy in achieving the UN Sustainable Development Goals](#)"
- [BBI report on project's contributions to SDGs](#)

### Replacing fossil-based products with bio-based alternatives

The bio-based industries are developing novel bio-based products that can replace and reduce dependence on non-renewable fossil-based materials that undermine the EU's climate neutrality objective.

Examples and/or further information (please click link):

- Products realised under BBI projects, see [here](#)
- [RoadToBio roadmap](#)

### **Building new 'circular' bio-based value chains**

The multi-sector bio-based industries are developing new cross-sectoral value chains that support circularity by enabling all these sectors to work together as a system, thereby improving circularity. More than 170 cross-sectoral interconnections throughout value chains are expected, thanks to the BBI JU.

Examples and/or further information (please click link):

- An overview of our membership can be found [here](#)
- [EU Bioeconomy Strategy \(2018\)](#)
- [OECD "Realising the circular bioeconomy"](#)

### **Conversion of bio-waste and industrial side streams to bio-based products**

The bio-based industries provide opportunities to sustainably convert underutilized resources such as bio-waste (food waste, garden waste), industrial side and waste streams, (the organic fraction of) municipal solid waste, into value-adding bio-based products. More than 50 new bio-based consumer products are expected from BBI JU projects. The revised EU Waste Framework Directive and other regulations require EU Member States to promote the use of materials produced from bio-waste. In the EU27 (+ United Kingdom and Norway), the current capture of food waste is 9,520,091 tonnes per year, just 16% of the theoretical potential, estimated at 59,938,718 tonnes.

Examples and/or further information (please click link):

- BIC & ZWE report '[Bio-waste generation in the EU: Current capture levels and future potential](#)'
- BBI JU projects: [AGRIMAX](#), [DEEP PURPLE](#), [EMBRACED](#), [PERCAL](#), [URBIOFIN](#), [VAMOS](#)

### **Partnering with primary sectors to enhance sustainability and increase the diversity of bio-based feedstock uses**

The bio-based industries collaborate with the primary producers as strategic partners in bio-based value chains to improve the use of domestic renewable feedstock from agriculture, forestry and fisheries as well as residues in an efficient and sustainable way.

Examples and/or further information (please click link):

- BIC members from primary sectors, see [here](#)
- Copa-Cogeca and BIC [joint workshop](#)
- BBI JU [study](#) on agricultural sector's participation in BBI JU

### 3. Bio-based industries transform the way sectors and society work

#### Green Growth in rural and coastal areas

The bio-based industries provide new green growth opportunities to primary sectors by involving them as strategic partners in bio-based value chains, providing new sources of income for primary sectors. Primary producers are involved to co-design value chains and their outputs, and to share the benefits thereof in rural, coastal and urban areas.

Examples and/or further information (please click link):

- Joint [Vision](#) 'The circular bio-society in 2050' and link to [SIRA consultation](#)
- [BIC mapping of EU biorefineries](#) and [JRC mapping of biorefineries](#)
- [ENRD Thematic Network on Bioeconomy](#)
- BBI JU projects: [AgriChemWhey](#), [GRACE](#), [Funguschain](#), [Pulp2Value](#), [PRO-ENRICH](#)

#### Involvement of new EU Member States (EU13)

The bio-based industries stimulate green growth by providing new opportunities to further the deployment of the bio-based economy in the EU13. The EU13's vast and untapped bio-based potential can help to stimulate green growth and to integrate new actors into bio-based value chains.

Examples and/or further information (please click link):

- [BIC country reports on bio-based potential \(Estonia, Latvia, Lithuania\)](#), also Poland and Romania (up-date version to be published by July 2020)
- BBI JU flagships projects in EU13: [LIGNOFLAG](#), [SWEETWOODS](#), [BIOSKOH](#)
- [BioEast](#)
- [EIP-AGRI](#)

### **Involving regions**

The bio-based industries are investing in European regions and creating new local value chains that support green growth in rural and coastal areas, helping regions and industry bridge the gap between bio-based investment opportunities and financial incentives at regional level.

Examples and/or further information (please click link):

- [New BIC platform to connect the bio-based industry and regions](#)
- [Committee of Regions on BIC platform with regions](#)
- [Collaboration BIC-ERRIN](#)
- [Collaboration BIC-Vanguard Initiative](#)

### **Involvement of market sectors**

The bio-based industries operate across multiple & diverse sectors from the primary sectors up to and including market actors. We connect brand owners with industries to accelerate the market uptake of new, bio-based products.

Examples and/or further information (please click link):

- [BIC members from market sectors](#)
- BBI JU projects with market actors involved e.g. [Biosea](#), [EMBRACED](#), [EXILVA](#)