The European Commission's Circular Economy Action Plan sets important ambitions for reducing consumption by making products more renewable, reusable and recyclable throughout their whole lifecycle – ambitions that cannot easily be achieved without taking full advantage of Europe's bioeconomy.

In the following paper, the European Bioeconomy Alliance (EUBA), which represents a wide variety of primary producers, processors and technology providers, highlights the significance of its sectors in contributing bioeconomy solutions for this essential transition to a circular economy.

Bioeconomy Strategy Action Plan

Bio-based products can significantly contribute to the transition towards a circular bioeconomy. However, concrete measures to replace fossil-based materials with responsibly sourced renewable and bio-based materials are still lacking today. For this reason, we also welcome the commitment to “supporting the sustainable and circular bio-based sector through the implementation of the Bioeconomy Action Plan”. The 14 measures of the EU Bioeconomy Strategy Action Plan of 2018 are instrumental in emphasising synergies between the circular economy and bioeconomy at EU and national level.

Synergies between the circular economy and bioeconomy

Circular and bioeconomy policies have strong thematic links – both having, for example, food waste, biomass and bio-based products as areas of intervention. Both policy agendas converge with respect to economic and environmental concerns, research and innovation, and societal transition towards sustainability and are very much interlinked.

This is also highlighted by the European Environment Agency’s 2018 report “The Circular Economy and Bioeconomy – Partners in Sustainability” and by the 2012 Ellen MacArthur Foundation report “Towards the Circular Economy”. The benefits of a circular bioeconomy and solutions that are both circular and bio-based are also outlined, together with the economic opportunity for bio-based products, in the World Business Council for Sustainable Development (WBCSD) 2020 report “Circular Bioeconomy: The business opportunity contributing to a sustainable world”.
Bio-based materials and products contribute to a circular bioeconomy

All of the associations in the European Bioeconomy Alliance support the EU in its ambition to achieve climate neutrality by 2050 by providing the inputs for a renewable carbon bioeconomy, while creating a sustainable competitive advantage for European industry. Bioeconomy ensures the outlet for resources derived from sustainable management practices which prevent the abandonment of forests and pastures, and avoids the risks associated with biomass surpluses such as fires and pest outbreaks.

Achieving climate neutrality requires the contribution of all sectors of the European economy, and clear incentives for developing climate-friendly and sustainable practices, products and technologies. In this respect, climate neutrality will only be possible by also cutting the emissions associated with the production, use and recycling of materials with the contribution of bio-based products.
Materials and manufactured products account for nearly one-fifth of the total EU CO₂ emissions. It is, therefore, crucial that a circular economy addresses the potential for climate change mitigation offered by materials and energy and links climate policy with the circular economy. By storing and using carbon dioxide and replacing carbon intensive fossil-based resources, sustainably sourced renewable materials offer a key opportunity to help achieve Europe’s climate ambitions.

By enabling the substitution of fossil-based materials and through their re-circulation in the economy thanks to recycling (mechanic, organic and chemical), renewable materials are also key for the European circular economy and security of supply. The European Commission’s strategic long-term vision for 2050, “A Clean Planet for All” identifies the bioeconomy and the circular economy as key strategic areas to achieve a climate neutral economy, stating that “sustainable biomass has an important role to play in a net-zero greenhouse gas emissions economy”.

The sustainable production of biomass strikes a balance between the economic, social and environmental aspects of sustainability, which are interdependent and mutually strengthen one another. Sustainable EU agricultural and forestry practices deliver benefits, such as healthy food, renewable and climate-friendly raw materials, ecosystem services, recreational activities for society, mitigating climate change, and protecting key habitats and nature.

Biorefineries processing renewable raw materials are the ‘factories’ that valorise every component of the renewable feedstock to produce a wide range of everyday products and ingredients in the food, feed, industrial and energy outlets. They play a vital role in adding value to the principles of a truly circular bioeconomy and ‘zero waste’ society.

**EUBA Recommendations:**

As an alliance, we also support the Commission’s focus on “key product value chains” and would like to make sectoral contributions as follows:

**Construction & buildings:**

- Initiatives such as the Commission’s Renovation Wave Strategy and Circular Economy Principles for Building Design, which promote energy-efficient buildings using bio-based materials and nature-based solutions, facilitate uptake and market stimulation measures. Further impetus within the Sustainable Product Policy Framework could for instance include
extending the scope of the eco-design initiative to additional products such as textiles and other bio-based products.

- Building with sustainable and responsibly sourced wood provides climate-smart long-term solutions. This has been recognised in the EC Renovation Wave strategy as well as Climate Target Plan 2030. The use of bio-based insulation materials addresses many concerns related to energy efficiency and environmental impact. This should go hand-in-hand with substantive calls for research and innovation. The use of natural bio-based insulation materials has increased in recent years, largely driven by concerns over the embodied energy and whole-life environmental impact of insulation materials.

Plastics
Through the Circular Economy Action Plan, the Commission aims to propose legislative waste reforms and consider actions in the field of bio-based and biodegradable plastics. In this context, it is important to consider that alternative feedstocks, such as bio-based and renewable feedstocks, help decrease the dependency of the plastics industry on finite fossil carbon resources, thereby contributing towards the EU’s climate adaptation and mitigation targets. In relation to forthcoming initiatives on packaging, agriculture and waste, the benefits of incorporating responsibly sourced renewable resources in bio-based products should be considered as equally valuable to the incorporation of recycled content.

- Furthermore, the role played by biodegradable/compostable plastics in the collection and organic recycling of unavoidable food waste, to produce high quality compost for soil enrichment, should be considered as indispensable towards helping achieve the EU’s ambitious targets for recovery of organic waste and its diversion away from landfill by end 2023.
- These benefits should be taken into consideration both in the revision of the Essential Requirements for the Packaging and Packaging Waste Directive and in the development of a Policy Framework for bioplastics.
- In addition, the use of biodegradable/compostable products in agriculture should be enabled, in compliance with existing standards.
- Policy under the European Green Deal should be developed in such a way that it enables further innovation in the field of bioplastics. This will help bio-based industries to contribute substantially towards delivering on the EU’s Climate goals, the Farm to Fork Strategy and towards the development of a circular economy.
As foreseen in the new Circular Economy Action Plan, a regulatory framework for bio-based and compostable material should ensure a level playing field for all economic operators providing solutions to tackle plastic contamination of sea and soil.

Creating circularity through collaboration across the bio-economy value chain
Taking a circular approach in the bioeconomy requires bringing together different value chain partners to develop innovative and sustainable bio-based solutions. Hence, initiatives mobilising relevant stakeholders and boosting investments and R&I funding across food, feed and industrial areas should be promoted. One example of such an approach is the Bio Based Industries Joint Undertaking and its proposed successor, the partnership for a “Circular Bio-based Europe Joint Undertaking”.

Sustainable product policy framework
Strong policy signals, measures and incentives, consolidated through the circular economy strategy, are important in order to engage industry in the creation of smarter products, processes and partnerships, taking into account the renewability of their raw materials as a key positive criterion. They are also essential to promote bio-based products’ visibility to stimulate market demand in strategic sectors (such as packaging, automotive, coatings, construction, cosmetics, energy, fertiliser, homecare, pharmaceutical and textiles industries).

Empowering consumers and public buyers
- Promoting the use of renewable raw materials and the visibility of bio-based products helps raise awareness of existing renewable alternatives to traditional fossil-carbon based products and enhance consumption of sustainable products and sustainable production patterns. Informing consumer of the existence and availability of bio-based alternatives is paramount for consumer choice.

- Certification and labelling systems based on European standards enable communicating the properties of bio-based products in a clear and unambiguous way. Therefore, building on EU initiatives, the EU should refer to existing standards and labels based on the standard EN 16785-1:2015 in official communications and give a clear preference towards products for which renewable raw materials were used in public procurement and/or in tax regulations. For instance, the uptake of the recently-developed NEN certificate and label for bio-based content would demonstrate compliance with the European standard and catalyse an increase
in the number of products labelled with the bio-based content. In that context, sustainability comparison between fossil-based and bio-based products should be carried out on a fair basis.

- Public procurement for bio-based biodegradable and compostable products could potentially be a game changer, notably by including renewability as a criterion for Green Public Procurement.
- Initiatives such as AllThingsBio are helpful in informing consumers about the bioeconomy and raising awareness about the benefits of using biobased products in everyday life.

The EU Taxonomy Regulation under Sustainable Finance

- This initiative has identified the transition to a circular economy as one of the six environmental objectives. Bio-based products have strong potential to enable this transition; the bioeconomy sector can provide benchmark cases for circular thinking and synergies could be identified between these two policy areas.
- Currently the technical screening criteria set out in Annex I, resurrecting the over-simplified argument of food v fuels/materials. This “Either/or” argument is a reductive, divisive misrepresentation. EUBA’s members seek to extract value from every fraction of any given feedstock, including those that might previously have been regarded as wastes or residues, to produce a broad spectrum of beneficial products. We therefore strongly suggest instead the alignment of the technical screening criteria for bio-based products to the widely accepted and upheld EU feedstock sustainability criteria already in place in the EU.
ABOUT EUROPEAN BIOECONOMY ALLIANCE

The European Bioeconomy Alliance (EUBA) is an alliance of leading European organisations representing sectors active in the bioeconomy – agriculture, forestry, biotechnology, sugar, starch, vegetable oils, pulp and paper, bioplastics, renewable ethanol, and research & innovation.

MEMBERS OF THE EUROPEAN BIOECONOMY ALLIANCE

- Bio-based Industries Consortium
- European Association of Sugar Producers
- Confederation of European Forest Owners
- COPA-COGECA
- Europe for Renewable Ethanol Producers Association
- European Bioplastics
- The European Association for Bioindustries
- The EU Vegetable Oil & Proteinmeal Industry
- Forest-based Sector Technology Platform
- Primary Food Processors
- European Starch Industry Association