

A successful Circular Economy requires a vibrant renewable Bioeconomy

The Bio-based Industries Consortium's views on the EU Waste Package, October 2016

The bioeconomy is circular by nature

The bioeconomy is a perfect illustration of circularity in that it regenerates CO₂ and uses renewable raw materials, replacing fossils, to decrease the environmental footprint of everyday products. The bioeconomy is not new. In the past, we built our economy on renewables - trees and plants - long before we discovered fossil raw materials and learned to produce products from e.g. oil.

The circular economy package should promote the use of materials from renewable, bio-based sources and should encourage the use of (organic) recycling as feedstock for producing new bio-based products in addition to composting and biogas production.

The most efficient way to advance the circular economy, to improve resource efficiency and to reduce negative environmental impacts is to reduce waste and to fully utilise industrial side-streams.

A sustainable waste management system that fully uses the potential of agricultural, forestry and municipal (biogenic) wastes will be essential to enable the circular economy and can supply the bioeconomy with recycled raw materials.

Key policy asks

Ensure access to biomass

- **Access to sustainable biomass** will be key to the success of a renewable circular economy: both primary and secondary raw materials have to be available, at competitive prices. The Biomass Crop Assistance Programme in the USA could serve as an example.

Promote industrial symbiosis and boost secondary raw materials

- Circular economy policy should provide a favourable business environment that **encourages businesses to create industrial symbiosis**, i.e. collaboration between producers that use each other's by-products.
- Industrial symbiosis can only be created if raw material streams can be transferred to other business partners for further uses. Hence, **regulatory barriers preventing the utilisation of waste residues and by-products should be removed**. Therefore, EU policy-makers should:
 - Develop a clear and harmonised legal framework and **detailed criteria for the 'by-product' status**. By-products are important building blocks for the bio-based industry in Europe. Industrial side-streams should be considered, as a general rule, to be by-products;
 - **Extend the definition of 'bio-waste'** to biodegradable and compostable products that follow the European standard (EN 13432);
 - Make **separation of bio-waste mandatory** either at the source or at central plants to enable recovery;
 - Include the **definition of 'organic recycling'** (Directive 94/62/EC);
 - Introduce an EU-wide **landfill ban for biodegradable municipal waste** to ensure that such sustainable raw materials are effectively made accessible for the supply chains of the European bioeconomy, and to the benefit of the circular economy.

Promote bio-based packaging

- Encourage the **use of sustainable bio-based packaging from renewable sources**. The definitions of biomass and bio-based packaging according to the existing CEN standard (EN 16575), and the provisions that support the use of bio-based packaging in the current proposal, represent a recognition for bio-based products as valuable solution for waste management issues and, moreover, they contribute to set up a real circular economy model.

The bio-based industries enable the growth of a renewable circular economy

The circular economy focuses on the efficient use of finite and renewable resources and ensures that those are reused or recycled as long as possible. The bioeconomy, more specifically, integrates renewable carbon. The bioeconomy is circular by nature: carbon - in the form of CO₂ - is sequestered from the atmosphere by plants, is used and reused and eventually cycled again into soil carbon or atmospheric carbon. Therefore, renewable resources are serving mankind much longer as compared to finite sources.

- The bioeconomy is not new. It is already worth about €2 trillion and is responsible for over 22 million jobs in Europe. It has become an EU strategic priority in recent years for its recognised potential in stimulating sustainable growth and jobs using renewable resources in a smart, sustainable and efficient way making Europe more self-sufficient and in reducing GHG emissions.
- Since 2014, the EU and industries across sectors have joined forces to invest €3.7 billion in 10 years through the Public-Private Partnership known as the Bio-based Industries Undertaking (BBI JU). BBI JU focuses on 1) securing sustainable supply of biomass, 2) optimising/building new value chains and biorefineries, and 3) creating new markets for bio-based products. The BBI is needed to de-risk investments in the emerging bio-based sector and to create the framework conditions required to leverage Europe's renewable resources, innovative technologies and industrial knowhow. This is important if the EU wishes to establish itself as a competitive force in the global bioeconomy race, especially with the US, Brazil and China.
- The benefit of bio-based products and materials is that they achieve a more balanced carbon cycle in comparison to fossil alternatives. It is clear that the rate at which CO₂ is emitted from bio-based products, matches the rate at which it is been sequestered in the biomass. While the rate at which CO₂ is released from fossil based products (1-10 years) is significantly higher than the millions of years it took for CO₂ to be fossilised and sequestered into petroleum, natural gas or coal.¹
- In other words, BBI is instrumental in demonstrating and commercialising sustainable bio-based ingredients, products and materials that can feed the EU's circular economy. A circular economy that should be more than only waste management. Upcoming policy will need to support the cross sector nature of bio-based industries, markets, products and processes to maximise the EU's circular economy potential.
- If Europe wants to decrease its dependency on cheap biomass imports, then there is an urgent need for the development of a coherent, holistic and supportive policy framework for biomass.

About the Bio-based Industries Consortium

The Bio-based Industries Consortium (BIC) is the private partner in the Bio-based Industries Joint Undertaking (BBI JU), a Public-Private Partnership with the European Commission. BIC represents a unique mix of sectors, including agriculture/aquaculture, agri-food, biotechnology/technology providers, forestry/pulp and paper, chemicals, energy and end-users.

www.biconsortium.eu

¹ Mauro Graziani and Paolo Fornasiero Edited, *Renewable Resources and Renewable Energy – A Global Challenge*, 2nd edition, Taylor and Francis, 2007.