

TRENDS & BARRIERS



Current and future TRENDS in the Bio-based industry:

The bio-based industry trend focuses on delivering products with similar or even better performance and technical characteristics than the conventional, fossil fuel-derived products, to counterbalance their higher cost, and appeal to the consumers' needs and expectations.



Bio-based chemicals sector:

- The main market drivers are moving towards less petroleum dependency and feedstock diversification (multiple feedstock inputs).
- Promote the idea of sustainability to manufacturers and offer innovative products.



Food, feed and cosmetics ingredients sector:

- Increasing potential for animal feed production, using agro-based waste or the by-products from biorefineries and in applications in the nutraceutical food sector.
- Increased availability and quality of added value compounds to be used in high-end sectors



Bioplastics sector:

- Enhancement of compostable plastic material applications in the packaging sector and the development of completely new materials.



Bioenergy sector:

- Production of energy along with the production of other streams/ products of high- value in the biorefinery context.
- Increase of short rotation coppice.
- Increasing relevance of sawmills as a provider of by-products both for the bioenergy and material sector.
- Combined heat and power (CHP) and electricity production through gasification and pyrolysis and the production of second-generation bioethanol.

Industry related BARRIERS that affect the adoption of bio-based practices:

- Low technology readiness level and commercialization status for many bio-based products;
- High costs of feedstock and seasonality of biomass cropping versus need of continuous feedstock supply;
- Lack of standards to guarantee the quality and stability of feedstock;
- Need to improve the cascade using of biomass, prioritizing the extraction of added value compounds;
- Inefficient transport and distribution of biomass;
- Lack of cooperation between the stakeholders in the relevant value chains;
- Hurdles in establishing partnerships between academia and industry;
- Limited financial support for new production facilities;
- Lack of a trained/skilled workforce.