

# Position Paper

## Call for evidence towards a circular, regenerative and competitive bioeconomy

### Executive Summary

CEN believes that standards will play a key role in meeting Europe's ambitions for Bioeconomy. To fully realise this potential, CEN asks the European Commission to:

- apply standards consistently in future legislation, including in the Bioeconomy strategy, to promote long-term competitiveness.
- recognize the value of horizontal standards and terminology to help to create a level playing field between sectors as well as trustworthy claims.
- harness the full benefits of European standards and unique advantages of the Vienna agreement to position European bioeconomy sector in the international markets.

CEN welcomes a fruitful dialogue with the European Commission on how to make these recommendations reality.

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### On-going standardization work supporting the bioeconomy

The New Legislative Framework (NLF) has enabled standards to support legislation. At the core of the NLF is 'presumption of conformity', meaning that by using a harmonized European Standard listed in the Official Journal of the European Union, a manufacturer is deemed to comply with the regulation. This is a key enabler for simplification, reducing administrative burden and the related cost associated with conformity assessment and certification, creating opportunities for scaling-up in the sector.

The use of the NLF also allows for greater flexibility that can respond to state-of-the-art advances and innovation. When there are technical advances, the content of harmonized standards can be revised without having to adapt the legal text. For the bioeconomy sector this approach provides a flexible, innovation friendly regulatory framework that supports competitiveness and strategic autonomy for Europe in the expanding market.

The European Commission have highlighted the importance and their continued support for standards in the Bioeconomy sector, for example:

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- Bioeconomy Strategy for Europe 2012 identified the development of key standards to ensure that research and innovation does not happen in a vacuum but is seamlessly linked to the bioeconomy's industrial sectors and markets.
- European Commission Communication on Biotechnology and Manufacturing 2024<sup>1</sup> highlighted the importance of standards for biotechnology, biomanufacturing and bio-based industries like the chemical industry in general.
- On-going expert study in EU policy actions to advance European and global biotechnology and biomanufacturing standards in support of the bioeconomy.
- 2025 Annual Union Work Programme for European Standardization<sup>2</sup> identified biomaterials, bio-based, and wood-derived products as a top policy priority.
- An EISMEA grant agreement with CEN, that is in the signature phase, for a mapping and feasibility study for standards for biotechnology, biomaterials, bio-based and wood-derived products that is expected to start in Q3 of 2025.

Standards play an essential role in providing technical guidance needed to implement European policies. CEN has multiple Technical Committees that produce product- or sector-specific standards for the bioeconomy sector, including:

- CEN/TC 112 - Wood-based panels
- CEN/TC 124 - Timber structures
- CEN/TC 172 - Pulp, paper and board
- CEN/TC 175 - Round and sawn timber
- CEN/TC 233 - Biotechnology
- CEN/TC 249 - Plastics
- CEN/TC 261 - Packaging, especially SC 4 Packaging and Environment
- CEN/TC 343 - Solid recovered materials, including solid recovered fuels
- CEN/TC 335 - Solid Biofuels and Pyrogenic Biocarbon
- CEN/TC 411 - Bio-based products
- CEN/TC 454 - Algae and algae products
- CEN/TC 455 - Plant Biostimulants
- CEN/TC 473 - Circular Economy

Standards strengthen European industrial base by fostering new value chains and developing sustainable, cost-effective industrial processes to support the growth and expansion of the bio-based sector and industries, attract investments, and boost market adoption. Without having relevant standards in bioeconomy there will be missed opportunities for innovation and increased challenges across the whole innovation pipeline<sup>3</sup>. The sector will risk becoming monopolized by a small number of large industry players as the barriers to getting new bio-based products to market are too high for SMEs.

Regulatory bottlenecks in Europe can pose structural barriers to innovation and competitiveness of European industry. Fragmented regulation forces industry, including in the Bioeconomy sector, to navigate multiple legal frameworks (chemicals, foods, agriculture waste) with innovators and especially SMEs facing high compliance burden

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<sup>1</sup> [EUR-Lex - 52024DC0137 - EN - EUR-Lex](#)

<sup>2</sup> [EUR-Lex - 52025XC01818 - EN - EUR-Lex](#)

<sup>3</sup> [https://www.imperial.ac.uk/media/imperial-college/medicine/infectious-disease/Standards-and-metrics-for-the-bioeconomy\\_EMBARGO-until-070524.pdf](https://www.imperial.ac.uk/media/imperial-college/medicine/infectious-disease/Standards-and-metrics-for-the-bioeconomy_EMBARGO-until-070524.pdf)

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with no clear route to market. A coherent regulatory landscape allows standards to offer innovation-friendly pathways to compliance for the industry.

- **CEN asks the European Commission to apply standards consistently in future legislation, including in the Bioeconomy strategy, to promote long-term competitiveness.**

### **Horizontal standards for bio-based products and materials**

Linked to the Lead Market Initiative and the Bioeconomy strategy, three mandates from the European Commission were issued to European Standardization Organizations to develop standards to support the growth of the European bioeconomy. One of these, issued on 07/03/2011, was to develop horizontal standards for all bio-based materials and products, regardless of industry sector and type of biomass used. This mandate led to the creation of CEN/TC 411 *Bio-based products* and the development of a range of standards, covering terminology, methods for determining bio-based content, sustainability criteria, life cycle assessment (LCA) and communication. The two other mandates – respectively issued on 07/03/2011 and 10/10/2008 - were to develop a set of product-specific standards for bio-solvents, bio-lubricants, bio-polymers, and bio-surfactants.

CEN/TC 411 *Bio-based products* has continued its work after the end of the mandate and developed standards needed by the industry and society, the latest published standard covers how to compare bio-based and fossil-based products through LCA. The TC is currently evaluating which standards may need updating and which additional standards might be needed to support the European bioeconomy.

Horizontal standards, covering products from all sectors and all biomass types, will be instrumental in creating coherence and a level playing field between sectors. They also ensure that an actor early in the value chain, such as a farmer, forest owner or material producer, does not have to meet a plethora of requirements from different sectors. They further provide an opportunity for governmental agencies on regional, national or EU level, to compare the effects of different actions across sectors. An area that could benefit from more harmonization at the European level is in biogenic carbon, particularly in relation to Carbon Accounting in the Product Environmental Footprint. Such an approach is already outlined in EN ISO 14067.

Horizontal terminology that is applied consistently between sectors will ensure transparent communication and claims that are understandable for actors such as investors, purchasers, and consumers. If terms such as bio-based is defined differently in different sectors, this will create confusion in the market and mistrust in the validity of claims.

- **CEN asks the European Commission to recognize the value of horizontal standards and terminology to help to create a level playing field between sectors as well as trustworthy claims.**
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## Position European bioeconomy sector in the international market

In the new interconnected world value chains span globally, and the bioeconomy sector is no exception. The global bioeconomy is estimated to be worth around \$4 trillion in 2024<sup>4</sup>, with the growth of the sector expected to bring increased commercialization, scaling-up and distributed manufacturing. To support the bioeconomy sectors' growth and innovation pipeline this section emphasises the need to develop technical standards for the sector.

CEN is committed to idea of primacy of international standards to promote free trade and the competitiveness of European companies on the global market. All National Standards Bodies who are members of CEN are also members of ISO.

The membership of European national standards bodies at ISO is an invaluable asset to the European market. This ensures that European countries take a leading role in international standards development, both promoting European values and ensuring that European industry are competitive in the global market.

European national standards bodies are leading multiple international technical committees in the bioeconomy sector, including:

- ISO/TC 89 – Wood-based panels, German DIN Secretariat.
- ISO/TC 6 – Paper, board and pulps, French AFNOR Secretariat.
- ISO/TC 276 - Biotechnology, German DIN Secretariat.
- ISO/TC 300 - Solid recovered materials, including solid recovered fuels, Finnish SFS Secretariat.
- ISO/TC 238 - Solid Biofuels and Pyrogenic Biocarbon, Swedish SIS Secretariat.
- ISO/TC 323 - Circular economy, France AFNOR Secretariat.
- ISO/TC 287 - Sustainable processes for wood and wood-based products, Brazil Secretariat with all three Working Groups led by European standards bodies, DIN, AFNOR and SIS.
- ISO/TC 308 - Chain of Custody, Netherlands NEN Secretariat.

CEN is also internationally aligned in multilateral settings through the Vienna Agreement between CEN and ISO, allowing for close cooperation between the organizations and Technical Committees. These agreements make standardization a powerful lever for the 'Brussels effect' globally and ensure that Europe creates standards rather than being dependent on standards from outside the EU.

- **CEN asks the European Commission to harness the full benefits of European standards and unique advantages of the Vienna agreement to position European bioeconomy sector in the international markets.**

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<sup>4</sup> [Why we need standards and metrics for the global bioeconomy | World Economic Forum](#)