Brussels, June 2025

ETRMA Comments on the EU Bioeconomy Strategy

The European Tyre and Rubber Manufacturers Association (ETRMA) welcomes the opportunity to provide comments on the European Commission's update of the EU Bioeconomy Strategy. The European tyre industry is actively investing in bio-based innovative materials and their circularity, aligning with the EU's objectives not only to promote sustainable industrial ecosystems but also to strengthen competitiveness. With our submission we aim outlining how the tyre sector contributes to bioeconomy and provide key recommendations on what is needed to accelerate the transition towards ensuring the long-term competitiveness of the EU bioeconomy.

Bio-Based Materials in Tyre Manufacturing

The tyre industry has a long-established reliance on bio-based materials including, among other, natural rubber, bio-based additives and resins and vegetable-based oils. Natural rubber derived from Hevea brasiliensis has been a fundamental component of tyre manufacturing since the development of the pneumatic tyre. As of today, natural rubber remains irreplaceable commodity in all type of tyres. Over the past two decades technological advances have triggered renewed investment in sustainable, bio-based innovations across the tyre sector. This includes the development of alternative sources to natural rubber, such as Parthenium argentatum (Guayule) and Taraxacum kok-saghyz (Russian dandelion). These last are being explored as tyre ingredients to reduce import dependencies of natural rubber.

In parallel, the tyre industry is increasingly integrating bio-based additives and softeners to replace fossil-derived processing oils. Vegetable oils such as soybean, rapeseed, and sunflower are already used in tyres not only to improve performance characteristics but also to reduce the environmental impact of raw material sourcing.

The use of bio-based fillers in tyre manufacturing is also under development. Lignin, a by-product of the wood industry, is being explored as a partial substitute for carbon black. Bio-silica derived from rice husk ash is already in commercial use as a sustainable alternative to traditional precipitated silica.

Innovation is also advancing in bio-based polymers, with ongoing efforts to produce synthetic elastomers—such as bio-butadiene and bio-isoprene—from renewable sources. These materials aim to reduce reliance on petrochemical inputs in key compounds like styrene-butadiene rubber (SBR) and polyisoprene.

These developments position the tyre industry as a proactive contributor to the EU's bioeconomy goals, particularly in scaling bio-based materials use. Through continuous innovation and integration of bio-based materials along with the increasing use of recycled materials, the tyre industry is actively reducing its reliance on fossil-derived inputs and contributing to the development of a more sustainable and resilient European bioeconomy. These advancements support the diversification of raw material sources and promote regional economic development.

Key recommendations on the Bioeconomy Strategy Update

As a key user of bio-based materials, the EU tyre industry encourages the European Commission to acknowledge the sector's contribution to advancing bio-based solutions in the updated Bioeconomy Strategy. We also highlight the importance of a supportive regulatory framework for circular and bio-based materials, as well as continuous support for innovation that reduces reliance on imported raw materials. ETRMA supports the European Commission to consider the following elements when updating the EU Bioeconomy Strategy.

1. Support the European Tyre Manufacturers' Rubber Strategy

The Tyre Manufacturers Rubber Strategy vision is the creation of a diverse, resilient and sustainable rubber value chain through strong and secure multilateral and bilateral partnerships as well as through investments in innovative technologies to reduce the use of virgin raw materials in tyres. This vision will allow the achievement of important objectives and deliverables.

The initiative involves collecting and analysing data on the production and consumption of both natural and synthetic rubber across various countries. It includes conducting economic assessments on issues such as price volatility in the rubber market.

Strengthening cooperation between producing and consuming countries is a key component of the Tyre Manufacturer's Rubber Strategy. This includes building bilateral relations with rubber-producing nations to prevent and mitigate potential cartel-like behaviour that could disrupt the market, such as export restrictions, ensuring continuity of supply and avoiding market shocks.

Furthermore, the initiative aims to establish a permanent multilateral dialogue involving producing countries and like-minded consuming nations. This dialogue would address not only supply issues but also sustainability concerns, including capacity building in the global rubber economy. It could draw on international cooperation frameworks like the EU Deforestation Regulation and leverage existing efforts from organizations such as the Global Platform for Sustainable Natural Rubber (GPSNR).

In terms of trade, the objective is to enhance access to sustainable natural rubber through free trade agreements with relevant producing countries. These agreements should incorporate commitments to environmental protection and fair labour practices. Additionally, considerations under the Carbon Border Adjustment Mechanism (CBAM) are important, particularly since access to rubber encompasses both natural and synthetic types. Any potential inclusion of rubber in CBAM needs careful evaluation with respect to its impact on the competitiveness of European industries.

Investment in the diversification of natural rubber supply is also a priority. This includes exploring alternatives such as dandelion and guayule, as well as advancing the development and use of secondary raw materials. The initiative seeks to act as a one-stop shop for funding mechanisms, facilitating large-scale production of bio-based materials for tyres. There is a need for improved access to EU funding for these alternatives, with programs like Horizon Europe and the Innovation Fund prioritizing tyre-related research and projects. Such support is vital for enabling substantial investment in bio-based and circular materials.

2. Clarify rules for circular raw materials

For a true bioeconomy to succeed, policymakers should also put in place clear and effective rules for circular materials, among the prerequisites to support the tyre sector towards reducing the use of fossil raw materials. As an example, materials recovered from End-of-Life Tyres (ELTs), such as the rubber itself in various granulate and powder ranges as pyrolysis oils and recovered carbon black, currently face legal uncertainty, since there are no EU wide end-of-waste criteria in place to allow their use as secondary raw materials in new tyre.

ETRMA encourages clear and supportive rules that will enable bringing these materials back to the market, to create an effective secondary raw material market: a need identified not only by the Letta and Draghi report but also by the recently published Internal Market Strategy of the EU Commission. Creating enabling regulation for secondary raw materials from bio-based and End-of-Life Tyre-derived sources should be seen as a step toward fostering circularity. This includes the creation of a harmonised approach across Europe to tyres at the end of life, starting with the adoption of EU wide end of waste criteria for end of life of tyres derived materials without any further delay.

Derived from tyres, these materials have a substantial biogenic component. Extending their use within the supply chain would help promote the adoption of bio-based and bio-sourced materials across Europe. Additionally, these recovered materials can gradually substitute fossil-based virgin materials in various applications. Rubber granulates and powders for instance are used in a wide range of products, from construction materials like flooring and roofing to equestrian surfaced, rubber soles for shoes and tyres.

3. Secure sustainable and resilient biomass supply

Securing a sustainable and resilient biomass supply for tyre production is critical to advancing the goals of the Ecodesign for Sustainable Products Regulation (ESPR) for which tyres are listed as a priority product. As the ESPR aims to reduce the environmental impacts of products throughout their lifecycle, **integrating bio-based materials into tyre manufacturing supports the transition away from fossil-based materials and enhances circularity.** By embedding sustainability at the material level, tyre manufacturers can not only meet ESPR requirements but also contribute to broader EU objectives on climate neutrality and biodiversity goals.

ESPR aims to reduce the environmental impacts of products throughout their lifecycle, it is essential that it does not become solely a tool for increasing the demand for recycled materials. Instead, it should also support the integration of bio-based alternatives, which, in some cases, may represent innovative technology solutions. To ensure a fair and balanced approach, the ability to report on sustainable materials (encompassing both recycled and renewable resources) should be considered. This reflects a more technology-neutral perspective, encouraging the adoption of diverse sustainable material solutions.

Care must be taken to address potential sustainability concerns when sourcing bio-based and bio-sourced materials as also highlighted in the Circularity Gap Report by the CE foundation[1]. Proper, transparent and traceable data is important for informed decision- making and policy development. This aspect is included in the ETRMA rubber strategy, and we request support for its implementation.

Conclusions

The European tyre industry is committed to advancing the EU bioeconomy strategy through innovation, investment, and the use of sustainable materials. ETRMA believes that with the right policy support, the sector can further scale the use of bio-based and circular resources together in a ratio that takes the advantages of every source into consideration and contribute to a resilient and competitive European industry. To this end, we look forward to supporting the European Commission in shaping a forward-looking, inclusive Bioeconomy Strategy.

[1] https://www.circularity-gap.world/2025