A united tyre value chain calls for immediate EU-wide end-of-waste criteria for recycled rubber.

1. Abstract & Summary

Level of support/ ETRMA and EuRIC[i], after the publication of European Commission JRC's report Scoping possible further EU-wide end-of-waste and by-product criteria, are pleased to see rubber recycled from end-of-life tyres among the "top 3" most suitable candidate streams for which to develop further EU-wide end-of-waste (EoW) criteria. However, this prioritization exercise is not enough without policy makers' commitment to immediately start working on an EU-wide EoW-Status for rubber, especially when rubber circularity is at stake and the tyre value chain (from producers to recyclers) is ready to take this step now.

Executive Summary: Definition EoW & Main Benefits/ An EU-wide EoW-status addresses currently diverging national regulations on waste streams. For rubber products and tyres a well-performing recycling market exists already. Harmonization of EU rubber and End-of-Life-Tires (ELT) markets -in terms of EoW-status- would support innovative recycling technologies and higher degrees of circularity in these sectors, by rectifying and preventing market imperfections and creating a single recycling market. Therefore, it is a strong contribution to the overarching objectives set in The European Green Deal to speed up the transition towards a circular economy and achieve climate neutrality by 2050, while supporting the release of the pressure on critical raw materials like natural rubber. High levels of experience and knowledge across the tyre value chain and transparency of the ELT waste stream strongly support the creation of an EU-wide EOW criteria for ELT and recycled rubber.

2. Response to scoping report

Regarding the prioritization exercise conducted by the European Commission/JRC, the tyre value chain seems to be misunderstood. Recycled rubber, despite scoring better (59 points) than plastics and textiles average scores (58.4 and 57 respectively[1]) has been left behind from the timeline to start the work for an EU-wide EoW. Consequently, the tyre value chain believes that the ELT derived Rubber waste stream, despite being not selected for immediate regulatory work for the definition of EU wide EoW criteria, deserves at least being given visibility on a timeline for regulatory work to start.

Furthermore, the tyre industry would like to emphasize the following points inherent to the managing of waste tyres (incl. recycled rubber) that the JRC's study has not rightly reflected in the scoping report.

Collection and recycling criteria are being applied in unjust way (Point 3.2 in Scoping Report)/ Thanks to the efforts of the tyre value chain during the last 25 years, the logistical issue of the collection of end-of-life tyres has been solved. Through the Waste Directive and the adaption of the waste hierarchy, the material recovery from ELT has increased from 10% up to 60% annually in Europe. This is a crucial fact within the process of achieving EoW, as it highlights that there is no material supply shortage, and that the recycling industry is ready to provide enough quantities and qualities to fulfill producers demand in line with the specific criteria set in the Waste Framework Directive[2]. All tyres are collected and

1 Both plastics and textiles include different subgroups of waste streams with different scoring going from 63 to 55 (e.g., PET (63), PP (55)).

2 According to Article 6 (1) and (2) of the Waste Framework Directive, waste shall cease to be waste when it has undergone a recovery operation and complies with specific criteria to be developed in line with certain legal conditions, in particular:

1. the substance or object is commonly used for specific purposes;
2. a market or demand exists for such a substance or object;
3. the substance or object fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products;
4. and the use of the substance or object will not lead to overall adverse environmental or human health impacts.

treated resulting in a current 95% treatment rate across Europe. This should be acknowledged in the frame of EoW and be incentivized. Accordingly, the Commission/JRC study[3] should reflect this regulatory steering effect.

Uses (Point 3.3 in Scoping Report)/ Out of the approx. 3 million tons (Mt) of tyres reaching end-of-life stage, 1.6 Mt are recycled into rubber, steel and textile fibers. In other words, raw materials recycled (RMR) from waste tyres which are used in many different applications and contribute to decrease Member States' reliance on natural resources and provide large environmental benefits as well as jobs creation and industrial growth opportunities[4]. This seems to be ill-understood in the scoping report.

- For rubber, certain economic sectors/industries should be added to the list in the table on page 32, including tire and automotive industries.
- In addition, unclear criteria result in disparities in the scoring model. Some candidate streams are given 3 points while having the same number of economic sectors mentioned in the table, e.g. Mill scale (scoring 3 points) vs. Rubber (scoring 2 points), while both have four associated economic sectors.
- Certain economic sectors are larger/more impactful than others. While JRC's methodology looks at the sheer quantity of economic sectors relevant for any given candidate stream, this approach seems somewhat unjust. For example, comparing a) "Construction: asphalt, road paving, safety barriers, vibration absorption, filling material, playgrounds, synthetic turf, roofing systems, backfilling, drainage materials" or ELT rubber with b) "Construction: reinforced concrete" for Polyethylene terephthalate. The diverging number of applications within the construction sector should be reflected in the model.

Considering the close score for the three top streams as identified by the scoping report and the methodological issues identified above, ELT rubber should be selected for immediate development of EU-EoW regulation. But at the very least be given visibility on the timeline for the regulatory activity to start.

3. Status Quo / Problem

The following section provides some background on the current status of the ELT rubber recycling needs, potentials and solutions.

Current ELT recycling system has untapped potential / Currently, in Europe we are achieving 38% mechanical recycling share in terms of ELTs sent for granulation. There is room for improvement of the waste hierarchy by increasing the material recycling share. Giving added value to ELT is crucial at the time that Commission's regulation proposal on intentionally added microplastics is putting pressure to almost one third of the end market usage of ELT derived material in the recycling market (i.e., infill in sports applications). This is a particular critical point, which particularly stresses the need of an EU-wide EoW because, end-markets for recycled rubber granulate and powders remain stable over the last decade[5]. This stability of end market applications is now under pressure and new markets are slow to develop. The demand for rubber in the EU will only rise in the future, and the only way to meet that demand and increase independency from raw materials is by the increase and uptake of recycled materials.
The recycling industry for rubber in Europe is well established, but still not operating at full potential regarding ELT. Performed mostly by seasoned SME's, the industry is still in need of a maturity step. In order to achieve this development step, EU-wide EoW status, as already incongruently present in some Members States, is needed.

Having "waste" as an output of recycling operations - especially for more demanding technical applications (i.e., high-quality recycling)- is hindering progress in the ELT business case.

3 candidate material streams for which higher material re-use/recycling rates and higher collection rates were reported, or for which no re-use/recycling rates and collection rates were reported by stakeholders, were considered as having a lower potential to increase their re-use/recycling rate, and therefore a lower potential for EU-wide end-of-waste or by-product criteria, and were given a score of 1 (red).
4 EuRIC's fact sheet on Mechanical Recycling
5 2021, AECOM, End of life tyre rubber Assessment of waste framework directive End of Waste criteria.

Need for diversification of material supply/ the production of rubber goods has been impacted by the reduced availability of synthetic rubber and carbon black. This demonstrates the need for Member States to become more resource independent and increase the recoverability and use of recycled materials from tyres. Currently, Russia supplies over 500,000 tons of carbon black and about 50,000 tons come from Ukraine each year, totaling more than 50% of the total European capacity. A diversification of supply is clearly needed.

The absence of the EoW truly de-incentivizes the wiliness to invest in a circular economy for ELT and achieve the needed diversification of material supply. The Commission preliminary decision to delay for another two years is regrettable, in a moment when diversification of supply and availability is more than ever a necessity.

4. Benefits and Solutions

Given the status quo of ELT recycling as outlined above, an EU-wide EoW status can provide a number of benefits for material recycling routes:

1. **Level the playing field with virgin materials and favour trade across European borders** in equal conditions. It will also reduce the administrative burdens associated with trading, secure the internal market for rubber, and enhance an economy of scales.
2. A **reduction of ELT exports** to non-EU countries can be achieved over the mid- to long-term.
3. Support the **diversification of supply of critical raw materials** from certain high-risk regions.
4. Assure that the **material is accountable for safety and quality criteria**[6]. This is of tremendous importance to increase the uptake of ELT derived rubber in the manufacture of new rubber goods and new tyres.
5. **Legal certainty for investments in research and development** in recycling technologies and business cases in a system that currently sees pressure on the existing recycling routes.

Definition of EoW-Status needs to differentiate between pre-processing for further recycling (e.g. chemical recycling) and processing for secondary raw material (e.g. artificial turf).

The tyre value chain is united for this step and believes that the time for an EU-wide EoW status for recycled rubber is now. This will add trust to the market, increase investors´ security and boost the research and development on innovative solutions of this valuable rubber. After carefully analyzing the results of the prioritization exercise, the tyre value chain is asking to be given visibility on a timeline for the regulatory work to the definition of EU-wide EoW criteria for ELT derived rubber waste stream.

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[i] **ETRMA:** The European Tyre & Rubber Manufacturers Association represent nearly 4.400 companies in the EU, directly employing about 370.000 people. The global sales of ETRMA's corporate members represent 70% of total global sales and 7 out of 10 world leaders in the sector are ETRMA Members[i]. The product range of its members is extensive from tyres to pharmaceutical, baby care, construction and automotive rubber goods and many more applications. We have a strong manufacturing and research presence within the EU and candidate countries, with 93 tyre plants and 16 R&D centres.

EuRIC: The European Recycling Industries' Confederation -is the umbrella organisation for recycling industries. Through its Member Federations and Companies from 21 EU&EFTA countries, EuRIC represents across Europe over:

- 5,500+ companies generating an aggregated annual turnover of about 95 billion €, including large companies and SMEs, involved in the recycling and trade of various resource streams;
- 300,000 local jobs which cannot be outsourced to third EU countries;
- Million tons of waste recycled per year (metals, paper, glass, plastics, WEEE, ELVs, tyres[2], textiles and beyond).

By turning wastes into resources, recyclers play a key role in bridging resource efficiency, climate change policy and industrial transition.

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6 Many regulations, like Declarations of Performance for construction products, or the REACH restriction of chemical substances only apply once the material has ceased to be waste.