ETRMA
Sustainable and Resilient Natural Rubber Supply Chain

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OVERVIEW

• Introducing European Rubber downstream industry
• The Characteristics and Importance of Natural Rubber
• Circularity and Resource efficiency
• A Sustainable & Resilient Natural Rubber supply chain
• Alternative Sourcing
The European Tyre Industry at a glance

The tyre industry – a stronghold of European manufacturing

- 200,000 jobs are directly related to the tyre industry
- 300 Million passenger car tyres are produced
- 18 Million truck tyres are produced in Europe

14 global tyre companies in the membership

324 million tyres were sold in the EU (cars and light commercial vehicles) representing 20% of the world tyre market

5.5% of turnover is invested yearly in R&D

5000 patents are held by each major company

25% OEM

75% aftermarket

50,000 service and distribution centres

> 15,000 service centres

> 50,000 connected jobs

<93 tyre plants

>17 R&D centres

>14 HQs

* Includes newly specified members (ETM Members)
The European Rubber Goods Industry

SMEs enabling the future

General rubber goods are used in the sky, deep in the earth and everywhere in between:

- **63%** Transport (automotive, rail, ships, aviation, aerospace, ...)
- **10%** Household appliances
- **8-10%** Industrial applications (construction, mining, agriculture, farming, machinery, ...)
- **10-12%** Energy/offshore
- **4-5%** Food contact (drinking water, baby care, medical devices, ...)
- **1-2%** Leisure and sports equipment

- **5%** of the industry’s annual investments are in R&D
- **> 6000** companies in Europe
- **98%** SMEs
- **30 Billion** turnover
- **~ 70000** jobs directly related to the Rubber Industry

Rubber is a material that is unique and strategic that cannot be replaced.
THE CHARACTERISTICS & IMPORTANCE OF NATURAL RUBBER
Hevea brasiliensis

- Native to Brazil, only thrives in tropical regions.
- Takes around seven years to mature before it can be tapped.
- Supplies 100% world production
- Unique performance characteristics
- Natural Rubber is a strategic product for the Automotive Sector>> 88%
- Natural Rubber is listed by the EU/European Commission as a Critical Raw Material since 2017
- Natural Rubber has a low substitutability

Natural Rubber is here to stay!
High level of **supplier country concentration** *(91% from only 5 countries on two continents)*,

**Global requirement** for natural rubber steadily increasing with the economic growth,

**European rubber industry fully dependent** on foreign imports

Natural Rubber is **essential** for all types of vehicle tyres, securing global transport of goods

**Natural Rubber** accounts for **34 % of the European tyre manufacturers raw materials costs**

Natural Rubber Industry **heavily dominated by micro farming** often in remote forest areas,

**Weak supply and demand equilibrium** *(risk of temporary and long-term supply deficit)*,

**Long supply chain** with many interlocutors and very limited traceability

**Supply heavily volatile to climate change, disease and trade disruptions**

**High environmental pressure** on limited geographical areas

Many of these factors raise the challenge of building and ensuring sustainability and resilience in the supply chain!
CIRCULARITY AND RESOURCE EFFICIENCY
THE EU TYRE CIRCULAR ECONOMY

Full Collection and Recovery

• Energy Recovery Output 38%
• Material Recovery Output 62%

• Still much potential to explore e.g.:
  • Recovery valuation
  • Market uptake of quality products
  • Increase Remanufacturing market
  • Maintenance and driving behavior

Tyres are complex technology products!
Recycling challenges

• Reduce material functionality loss during recycling circuits,
• Increase rubber-to-rubber material recycling **RUBB-ENDURE**

Raw-material challenges

• Increase alternative sustainable sources:
  • Alternative natural rubber sources (Guayule & Kazakh dandelion),
  • Bio-based building blocks for the manufacture of synthetic rubber from for instance wood biomass.

**EU Tyre industry circularity and resource efficiency is very advanced, recognizing there are still many objectives to achieve.**
ALTERNATIVE SOURCING
• Natural Rubber listed as a Critical Raw Material
  • Natural Rubber is and **must remain a critical raw material** for the future due to high import dependency and significant identified risks of supply disruptions.

• **Support and promote alternative sourcing**
  • Promote alternative sourcing from outside the main producing south east-Asian region
    → In 2018 some **26.4%** of EU imports originated out of the African continent
  • Promote alternative sourcing from agricultural sources other than *H. Brasiliensis* rubber
    • Intense research is ongoing to develop at least two alternative sources, which can be grown in the EU i.e. Guayule and Kazakh Dandelion
    → **5-10y – new agronomy will be in place!**
Alternative sourcing is in demand from the user industries!

- Reduce production concentration of global production,
- Local sourcing reducing supply risks,
- Extending global geographical production area,
- Reduce volatility from climate change, diseases and trade disruptions,
- Reduce stress on supply and demand equilibrium,
- Potential sustainable production.
- Shorter supply chain and increased supply flexibility and security
- New agronomy → EU employment in farming and processing
ADVANCING SUSTAINABILITY IN THE RUBBER INDUSTRY

• Is more than an environmental necessity.....

• It’s also an instrument to build resilience and economic growth!
Thank you