REACT Webinar: Removing Harmful Chemicals from Textile Waste

Welcome & Introduction

EU GREEN WEEK 2021 PARTNER EVENT

ZERO POLLUTION #EUGreenWeek

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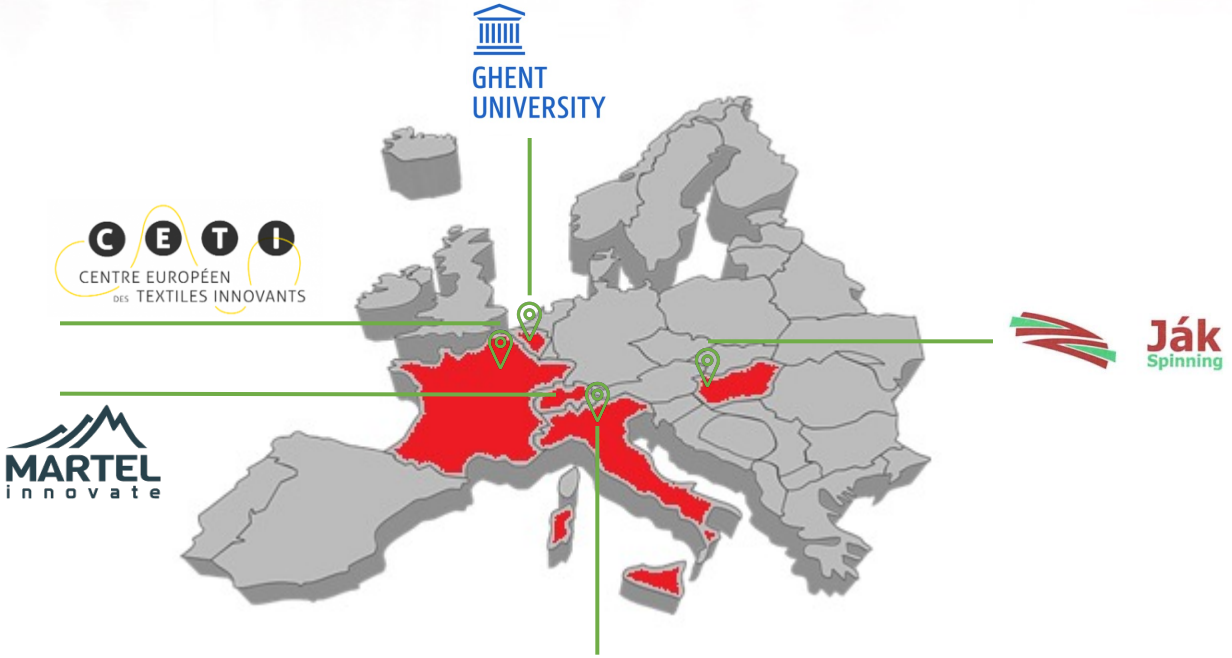
REACT

REACT – General project information

H2020-SC5-2018-2019-2020: Methods to remove hazardous substances and contaminants from secondary raw materials

- **36 months duration**
  (June 2019 – May 2022)
- **Consortium:**
  7 partners from 5 EU countries



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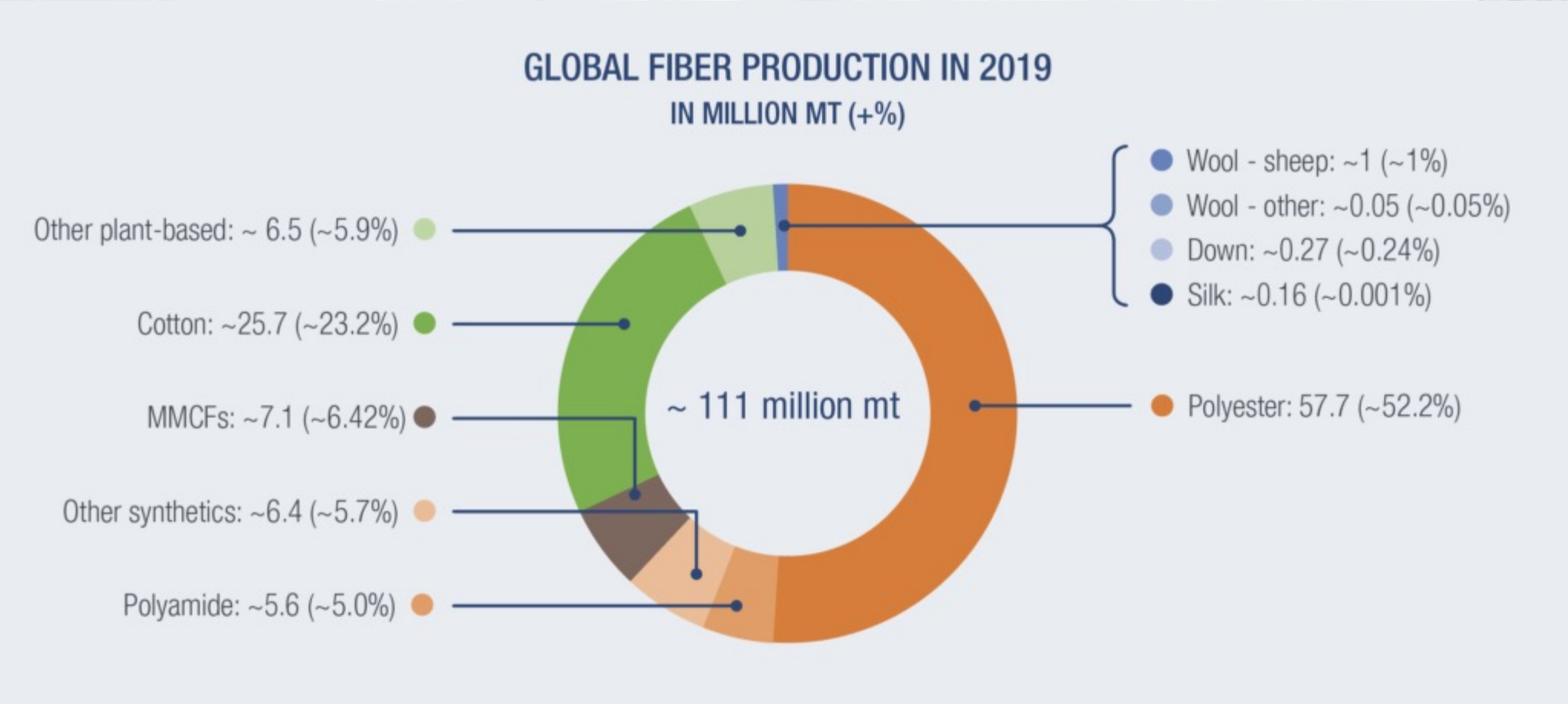
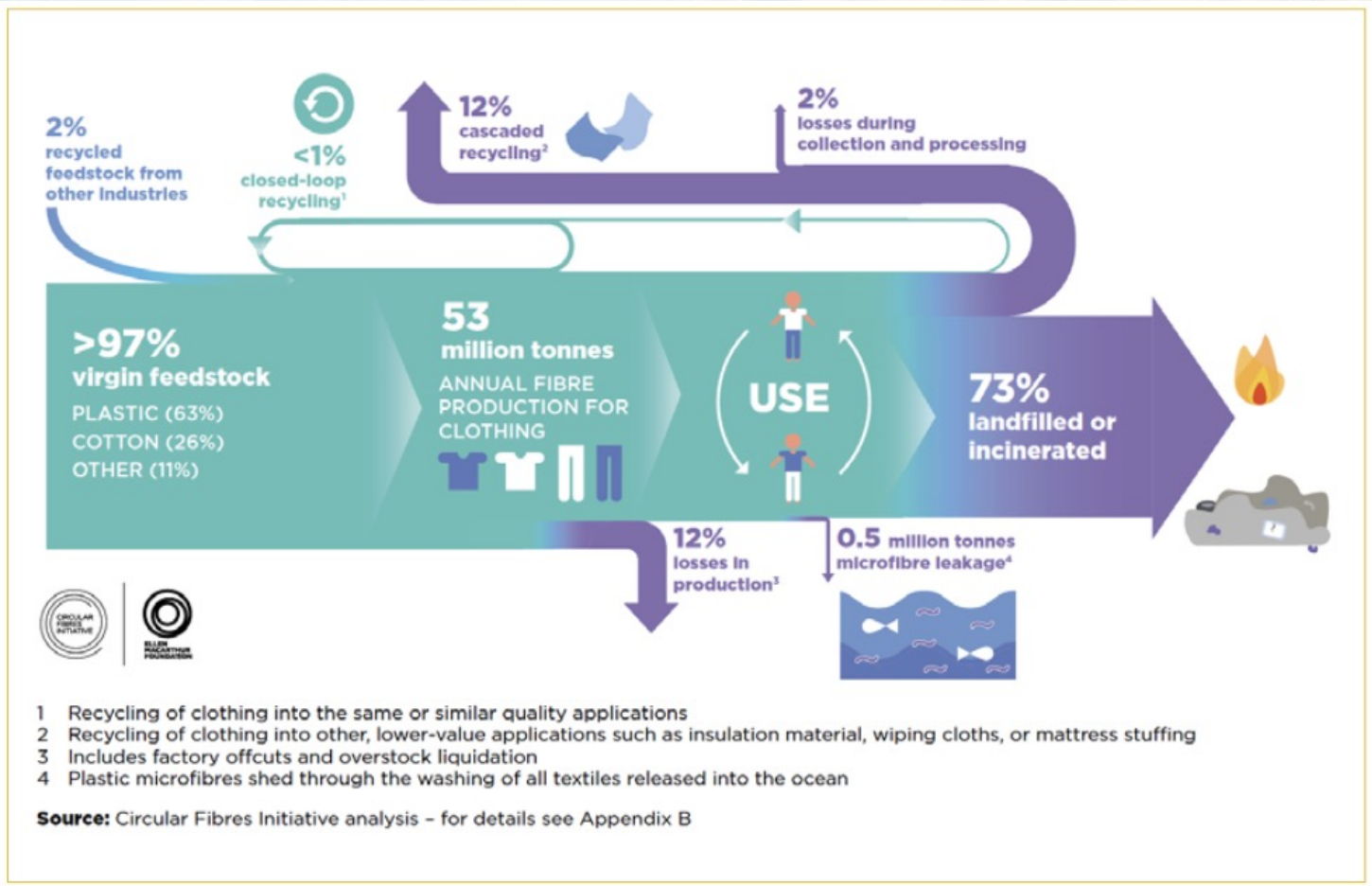
Textile sector volumes



Source: 2020 Preferred Fiber and Materials Market Report – Textile Exchange

Circularity in textile sector



Textile recycling problems:

- Diversity materials
- Different uses
- Additional chemicals for enhancing characteristics

Recycling technologies: hazardous chemicals removal

Mechanical

Preliminary substances removal

Chemical

Removal hazardous materials into process

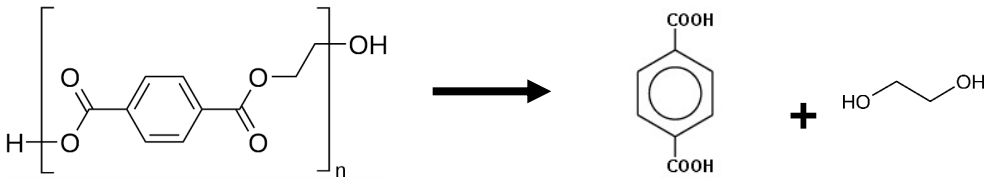
DEMETO: Modular, scalable and high-performance DE-polymerization by MicrowavE TechnolOgy

Horizon 2020

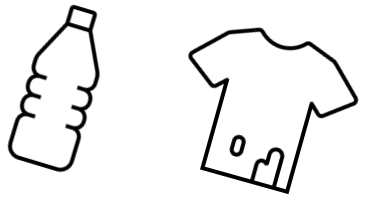
Polyester recycling innovative technology

Chemical approach

Depolymerization



New products



DEMETO

Alessandro Sanzone

PhD in Chemical, Geological and Environmental Science at the University of Milano Bicocca. He works at the Gr3n company as SA R&D laboratory manager. He has a skills on chemical organic synthesis. He manages the development on innovative process, based of a new application of microwave technology to a well-known chemical reaction, which provides for the first time an economically efficient chemical recycling process of PET (Polyethylene Terephtalate)

Saxion University

Saxion University

Jens Oelerich

Associate Professor Sustainable Textiles, Saxion University of Applied Sciences
He has a solid background in academic and applied research he likes to develop sustainable strategies, materials and processes for businesses in the textile, chemical and polymer industry. He is particularly interested in material recycling with a focus on value retention – finding the best follow up application for used materials in combination with the lowest environmental impact.

REACT: REcycling of ACrylic Textile waste

Horizon 2020

Outdoor textile

90% market made in acrylic fibre

Finishing on textile:
Weather conditions resistance
Water-repellent
Waterproof

Approach:
removing the finishing on fabrics before mechanical recycling

REACT

Valentina Trovato

She was awarded her Master's degree in "Chemistry" from the University of Messina, Italy. She won a scholarship for "Nanomaterials and nanotechnologies for sustainable development and the cultural heritage" at the Institute for the Study of Nanostructured Materials of the Italian National Research Council (ISMN-CNR) in Palermo (c/o Messina Univ.). She received her Ph.D degree in "Engineering and Applied Sciences" at University of Bergamo (IT). Since 2020 she is holding a post-doctoral position at the Department of Engineering and Applied Sciences of the University of Bergamo. Her research interests deal with the study and development of hybrid organic-inorganic materials for the realization of wearable sensors.

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Q+A Session

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