Sustainability and Circularity in the Textile Value Chain

TRADE AND ENVIRONMENTAL SUSTAINABILITY STRUCTURED DISCUSSIONS (TESSD)
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Sustainability and Circularity in the Textile Value Chain

A Global Roadmap

Available at: www.unep.org/sustainabletextiles
Environmental and Social Impacts of the Textile Sector

2-8% is its share of the world’s greenhouse gas emissions

86 million Olympic-sized swimming pools of natural water is used annually

9% of microplastic pollution in our oceans comes from the sector

0.58 kg of chemicals are required to produce 1 kg of textiles

Textile workers are at risk of exploitation, underpayment, forced labour, health risks and abuse – particularly women
Environmental Hotspots

**Cotton Cultivation**
- Fertilizer, herbicides, pesticides
- Land use (biodiversity & habitat loss)
- High water usage

**Wet Finishing Process**
- Coal-based energy
- Chemicals & water pollution

**Washing & Drying**
- Electricity
- Water
- Detergent
- Microfibres

**Synthetic Fibre**
- Fossil fuel

Impact relatively low, but significant resource and economic loss (only 13% recycled) → loss of potential to decrease impacts across all stages

Textile Sector Hotspots

Impact categories and hotspots within each stage:

- **Climate**
- **Freshwater use**
- **Land use**
- **Social risk**
- **Chemicals risk**

Towards a circular textile value chain
Three priorities to deliver system change in the textile value chain

Shifting Consumption Patterns
Optimising design, business models and consumer behaviour

Improved Practices
Optimising practices and behaviour in existing sites, companies and processes

Infrastructure Investment
Investing in shared physical technology and systems

## Nine building blocks needed to deliver the three priorities

### Improved Practices

1. Sustainable and circular textile business models are adopted globally.

2. Textile overconsumption and overproduction are addressed.

3. All textile products are designed to minimize impacts and support circular models.


5. The textile value chain drives resource efficiency and eliminates production pollution, production waste, on-site fossil fuel use and chemicals of concern.

6. A just transition with skilled, safe, and empowered people takes place and social issues in the textile value chain are addressed.

### Improved Practices + Infrastructure Investment

7. Textile raw materials are shifted to sustainable or recycled sources.

8. Significant improvements in shared infrastructure are made globally for a sustainable and circular textile value chain.

### Infrastructure Investment + Shifting Consumption Patterns

9. All textile waste is diverted from avoidable landfill and incineration.
Designing and producing products to increase material efficiency by 10% would drive 24 Mt CO2e of emissions benefits by 2030.

Design must be informed and intentional. Improved data and feedback loops will be critical to take into account knock-on effects of design at the stage of production, use and end of use.

Products should be designed to consider the relevant circular business model (e.g. durability for rental), and with the assumption that they will be an input to closed loop recycling.
01

Products are designed for reduced impact, considering: the full impact of design choices, including fabric choice, elements affecting reuse and recycling (such as design for disassembly), specific dyes, finishes, and structures; and designs optimizing efficiency such as minimizing fabric cut-out.

02

Products are designed for circularity, including design for longevity, recycling, or disassembly (including modular designs, removable stitches/glue, or mono-material designs).

03

Design ensures that ‘safe and recycled or renewable inputs’ are used in products with substances that are hazardous to human health, or the environment designed out of systems, as they affect safe material circulation.

04

Design stays relevant, and feedback loops are created from both producers and consumers to ensure that designs stay relevant and optimal.

Encourage circular and sustainable product design through robust evaluation of life cycle impacts – including material choice, elimination of chemicals of concern, recyclability, and durability – and by applying incentives and regulations such as subsidies, tax/VAT (dis)incentives, sustainable design criteria, or links to EPR mechanisms.

Support the development of credible global standards, decision support data and tools, and guidelines for circular design with adequate industry consultation to reflect value chain realities, ensuring that duplication is minimized, and solutions are usable across markets, such as considering the geographical variations of existing policies and initiatives.
Increased recycling and collection of waste can reduce annual CO2e by 18 mln tons and move the industry towards a closed-loop system.

*Shifting consumer behaviour* and *global dynamics* are required to avoid the need for landfill and incineration; for example, through circular solutions that reduce waste outputs. Solutions are needed to avoid shifting responsibility for waste disposal, such as trade of used textiles to locations that cannot use them and lack the infrastructure to adequately process textile waste.
KEY ACTIONS

01
Textile waste is diverted from landfill globally and managed responsibly to supply fibre-to-fibre recycling or other optimized recycling and reuse purposes.

02
Textile incineration or destruction is prevented except in cases of extreme contamination. Textiles are reused, recycled or repurposed instead of incinerated or destroyed.

Explore trade policy options for textiles waste (pre- and post- consumer) to maximize circularity across the value chain, while recognizing current challenges with countries receiving used textiles and waste they cannot process and finding joint solutions that are beneficial on all sustainability pillars.
Identified gaps to achieve sustainability and circularity in the textile value chain

- Shared global industry targets on sustainable and circular textiles
- Policymakers create a cohesive global policy strategy and formalize measurable national plans
- Data is gathered and analysis tools improved to support effective decision-making
- Knowledge on consumer communications and behaviour for circularity is delivered to policymakers and the private sector
One UNEP Textile Initiative

Policies, financial measures, industry practices and norms, and advocacy that promote a circular textile value chain

**FOCUS PRIORITIES**

- Scaling circular business models
- Addressing overproduction and overconsumption
- Eliminating hazardous chemicals

**FOCUS STAKEHOLDERS**

- Shifting industry norms towards sustainability through target setting, design for circularity, and phasing out most harmful practices
- Development and implementation of policies, strategies, legislation and action plans for a circular textile value chain
- Shifting investments to finance circular textile business models, technologies and infrastructure
- Advocacy to shift textile consumption towards circularity, and thereby activate changes across the entire value chain
Global Fashion Industry Target Consultation

900+ STAKEHOLDERS

90+ COUNTRIES

6 REGIONAL WORKSHOPS

29 ACTION POINTS

BRANDS
RETAILERS
PRODUCERS
The circularity and used textile trade project

Objectives

• Project funded by the European Union, duration from 1 October 2023 – 30 September 2025.

• Focus countries (tbc): Ghana, Kenya, Tunisia and Pakistan – world’s top importers of used textiles.

• In collaboration with governments - environment, trade, industry and development agencies, policymakers, industry partners, civil society, intergovernmental and trade organizations.

Overview

1. Produce a global guideline with criteria to differentiate a used-textile product from waste and to determine the suitability of exporting used-textiles that promotes the transition to circular and green(er) economies of importing countries, sustainable social and economic development.

2. Create and facilitate platforms for knowledge exchange and dialogue among exporting and importing countries to advance a sustainable trade of used textiles, to promote circularity in the sector, support sustainable socio-economic growth, and help alleviate negative impacts on the environment and human health.
THANK YOU

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