

LCM 2023

THE 11TH INTERNATIONAL CONFERENCE ON LIFE CYCLE MANAGEMENT

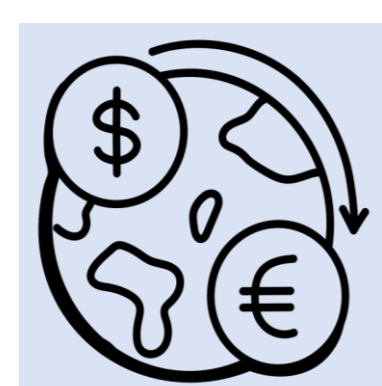
Risks and Opportunities for a Socially Sustainable Circular Economy Transition in the Textile Sector

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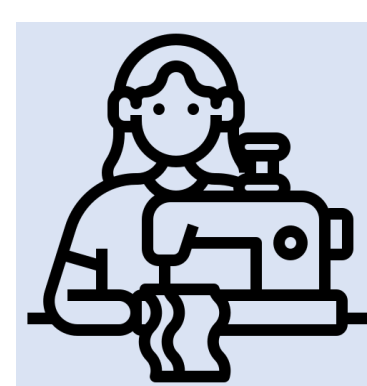
Problem & aim

The widespread presence of textiles in our life can cause us to overlook the issues of environmental and social sustainability that affect this industry. Here, we highlight the reasons for poor social sustainability, barriers to change and policy related opportunities

Overview of the textile sector



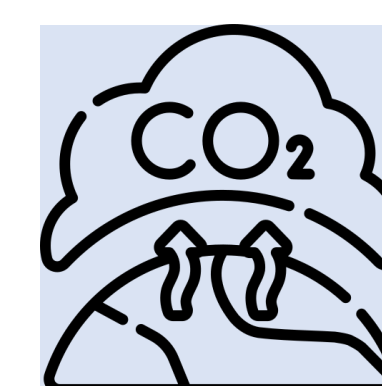
Global textile market including apparel (~75%), technical textiles (~12%) & household goods (~9%) is valued at **US \$961.5 billion**



25 million people, the majority women, work in garment manufacture.



1% of the ~90 billion articles of clothing manufactured and sold each year gets recycled into new garments.



8% of global GHG emissions & **9%** microplastic pollution is annually generated from textile industry.

Textile/ apparel supply chain

- **Complex Supply Chain challenges:** Textile industry's long supply chain (Fig. 1) involving many suppliers, sub-suppliers, workers, retailers, and users often faces issues of resource inefficiency, pollution, and bad labor practices.
- **Circular Economy Transition:** CE framework (Fig 2) offers to recapture lost value reducing resource use and environmental challenges.
- **Benefits of circularity:** In the social dimension, CE creates high-skilled jobs, new networks, promote sustainable consumption behavior, & corporate reputation.

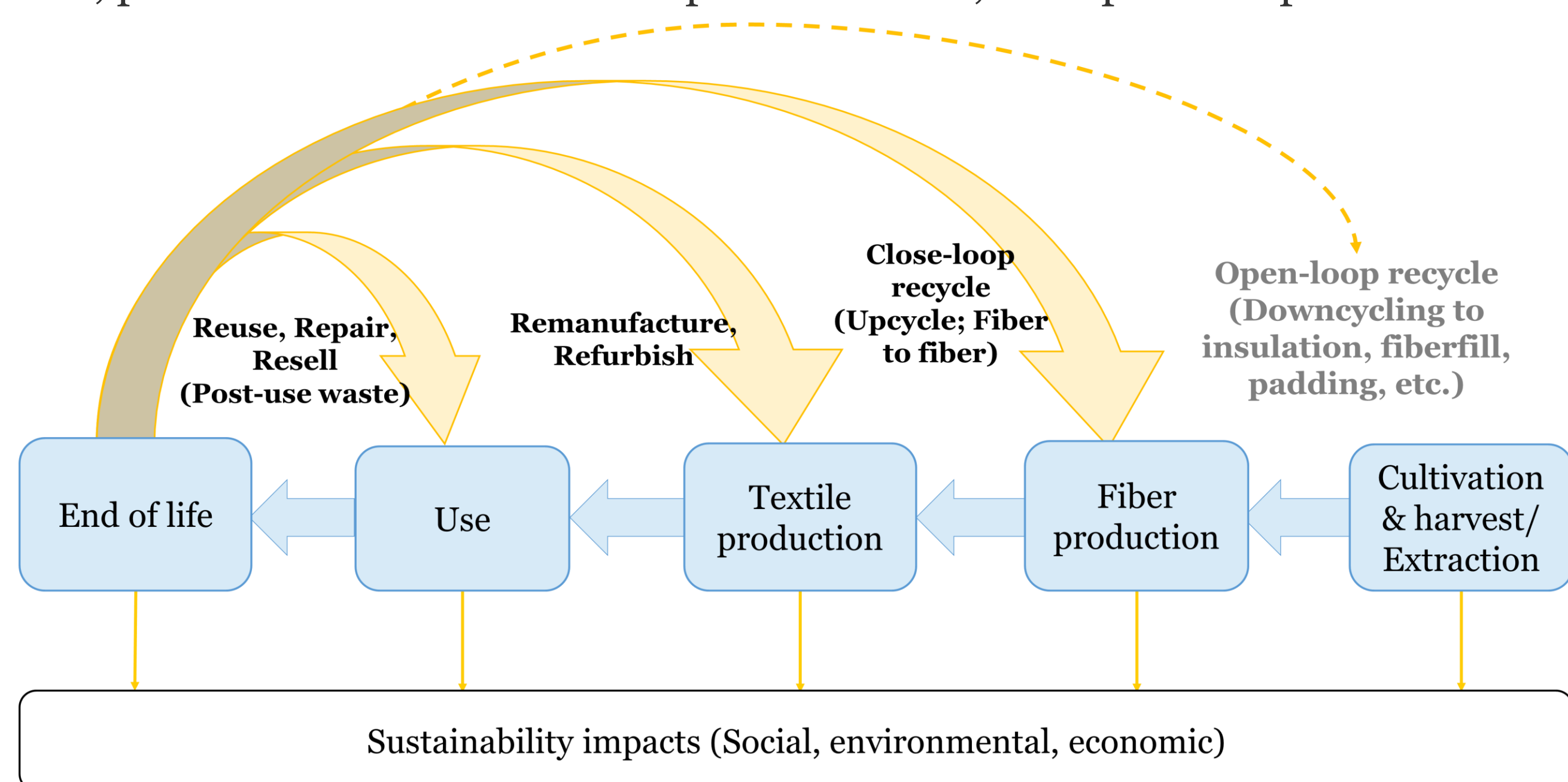


Figure 2. Traditional linear supply chain (in blue) leads to waste of resources but circular economy framework (in yellow) links forward and reverse logistics improving sustainability.

Risks to social sustainability in textile sector

- Despite the benefits, the circular transition also creates **social risks** for workers, consumers, local communities, suppliers, & society.
- **Social life cycle assessment**, a tool developed by UNEP/SETAC, is often used by researchers to find the hotspots in a textile supply chain

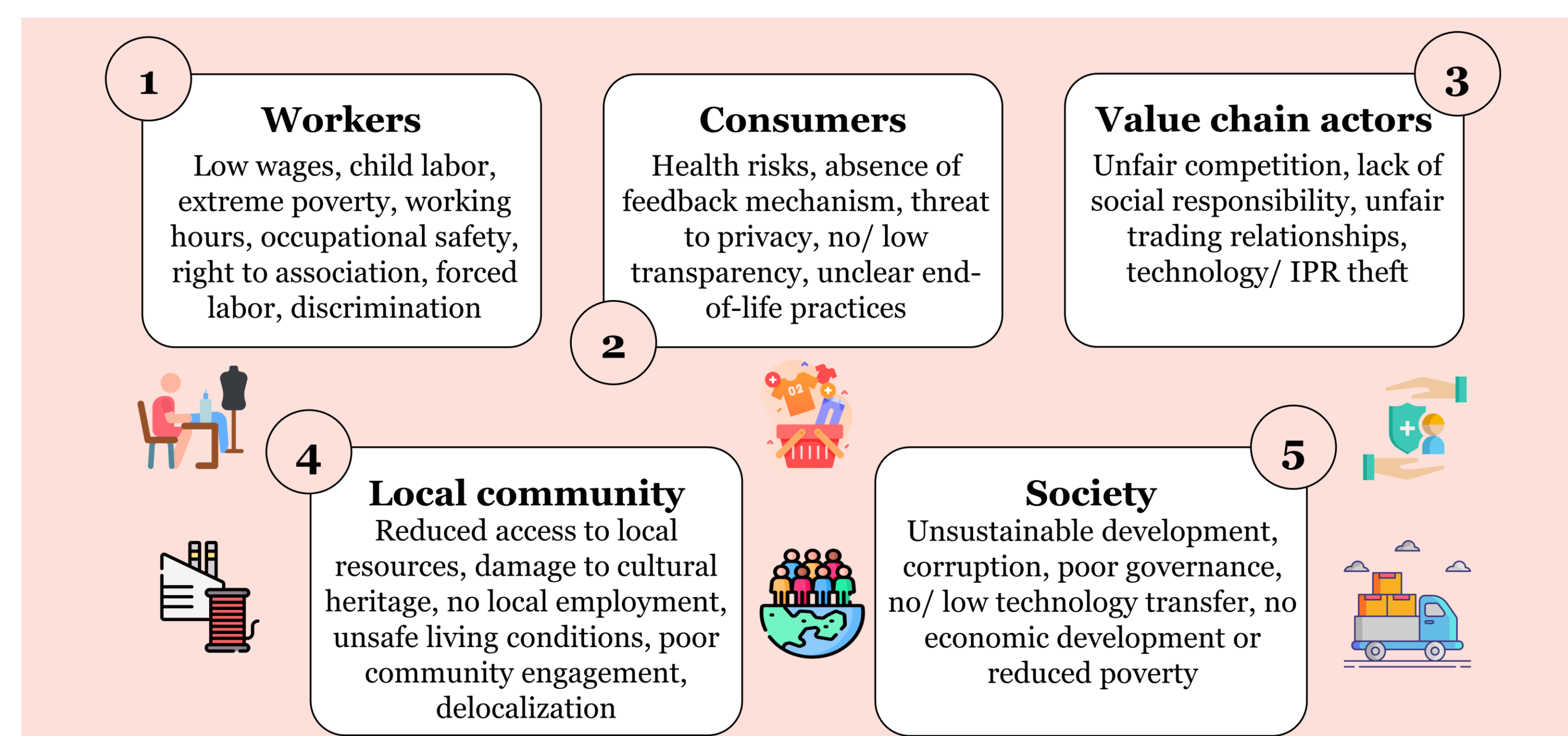


Figure 3. Commonly used social risk indicators for evaluating social sustainability.

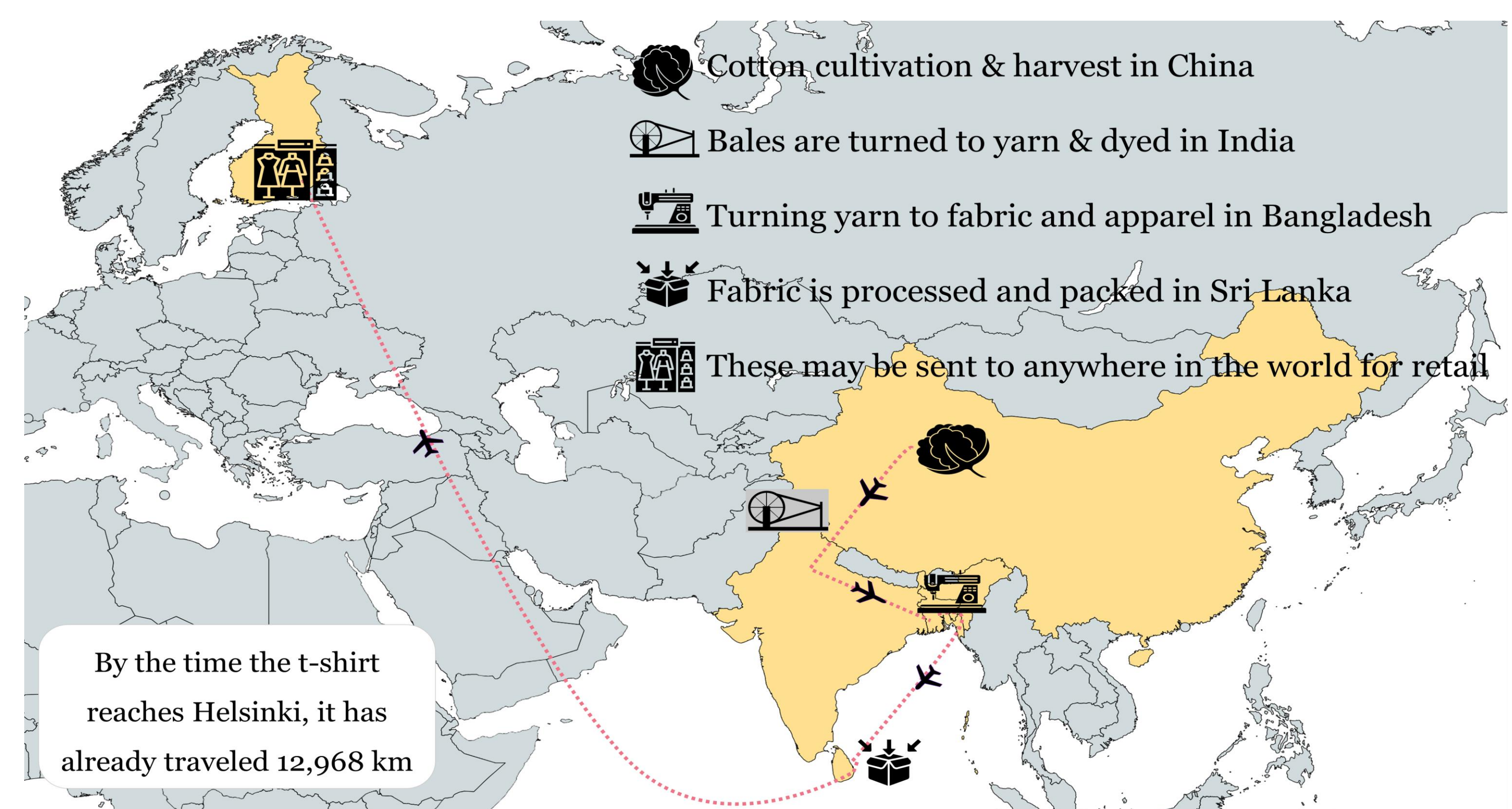


Figure 1. Typical supply chain for a cotton t-shirt

Opportunities: Policy efforts for textile sector

- The EU policy roadmap promotes repair setup, reuse/ resell opportunities, & responsible consumption.
- Key areas of policy focus are knowledge & recycling technology transfers, promoting transparency & traceability within supply chain, and consumer awareness.
- Global efforts include New York City's Textile Waste Reduction Program, Canada's Textile Waste Reduction Strategy Act, China's Circular Economy Development Strategies Action Plan, Bangladesh's Textile policy, and many others

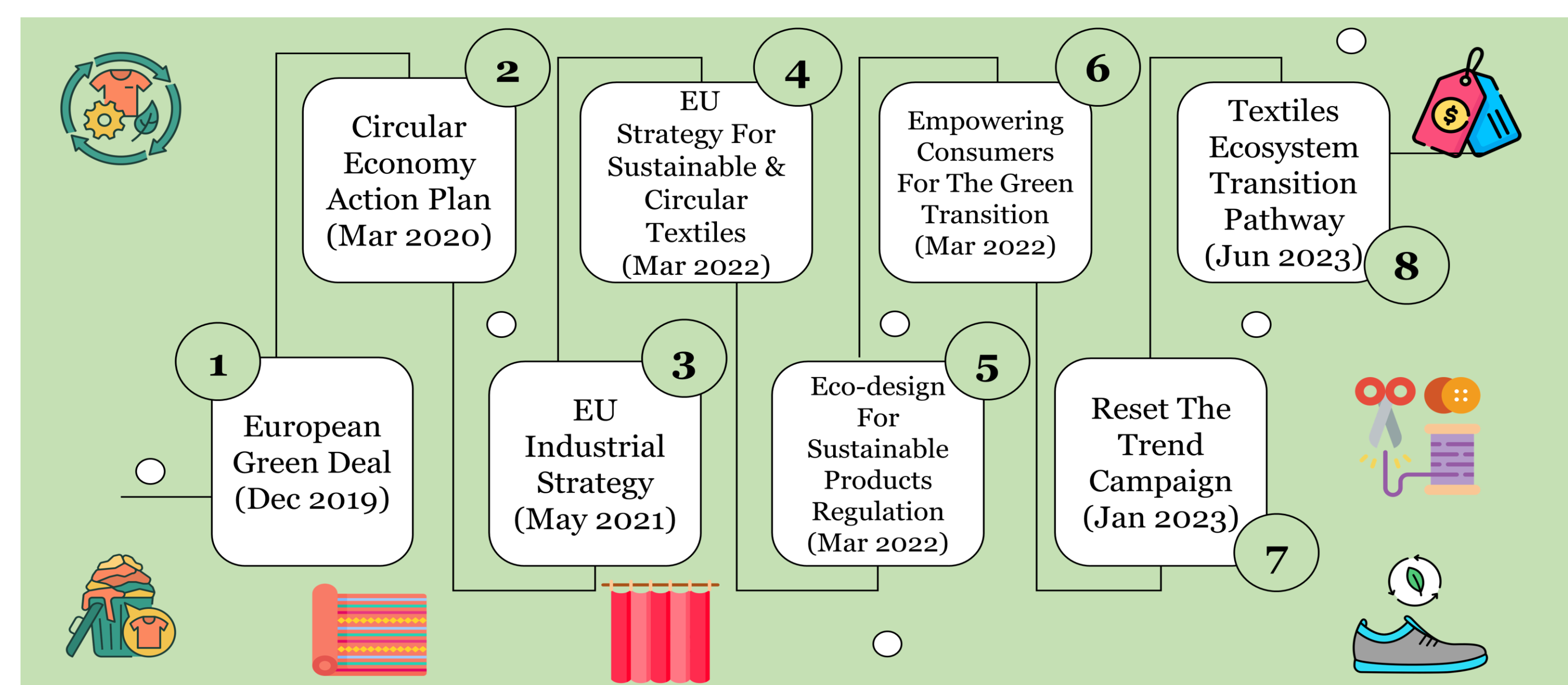


Figure 4. The EU Textile Policy Roadmap



- Textile are largely produced in the east and transported across the world leading to several risks created by varying levels of transparency across the supply chain
- Better business models like circular economy transitions & governance including policies/ regulations may address the risks.

