

Sustainability and Circularity in the Textile Value Chain

GLOBAL STOCKTAKING

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UNECE Project “Enhancing Transparency and Traceability of Sustainable VC in Garment & Footwear”

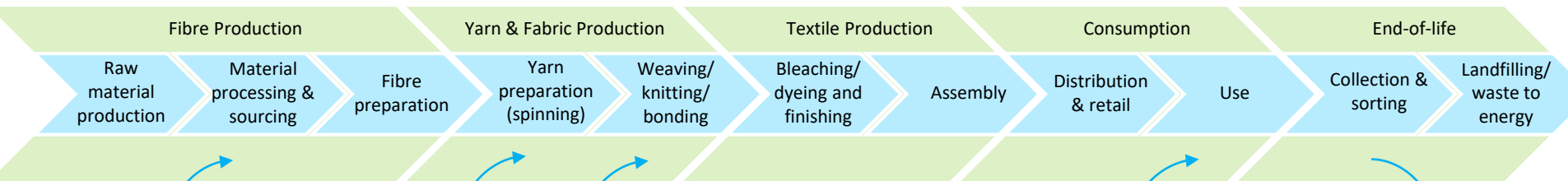
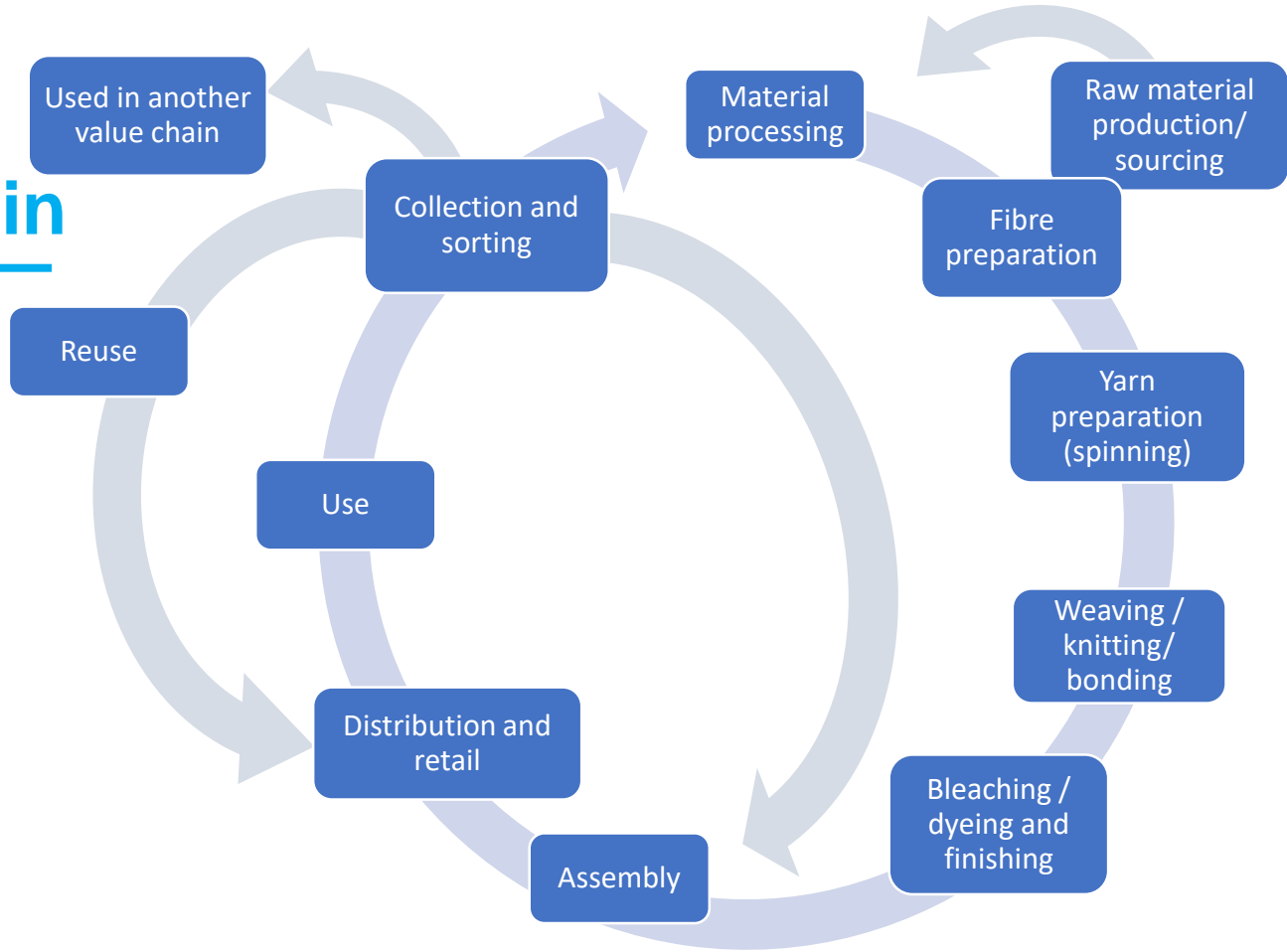


based on

- **research** by United Nations Environment Programme (UNEP) and FICCI
- **multi-stakeholder consultations:**
 - expert workshop by UNEP Jan 2019
 - session during the Fourth United Nations Environment Assembly
 - session at the World Circular Economy Forum (SITRA 2019)
- **peer review** by stakeholders and experts
- **report:** *UNEP, Sustainability and Circularity in the Textile Value Chain. Global stocktaking. Forthcoming (2020)*

Textile Value Chain

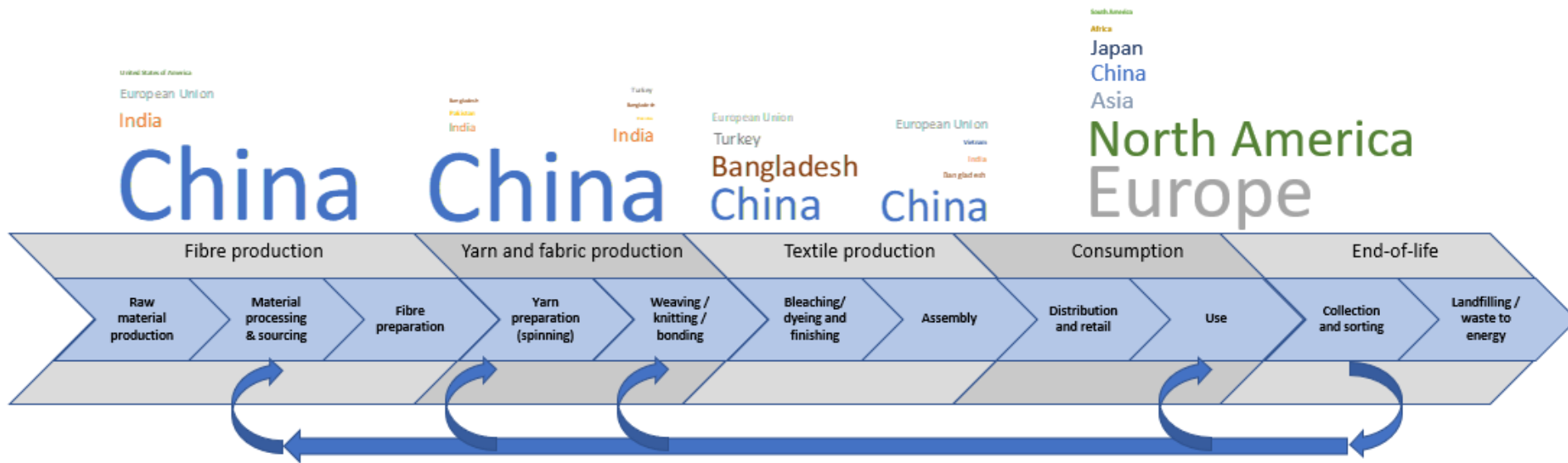
- comprises actors and stakeholders
- often represented as linear albeit possible loops
- aspiration to shift to circular system while keeping materials at highest possible value



Geographical Breakdown of Global Apparel Production



- stages of low value primarily in Asia and developing/transitioning countries (net exporters)
- with rising value of product the global share diversifies geographically
- latest stages in value chain considerable globally diversified with major players Europe and North America (net importers)



Environmental hotspots



cotton cultivation

- fertilizer, herbicides, pesticides
- land use (biodiversity & habitat loss)
- high water usage

synthetic fibre

- fossil fuel

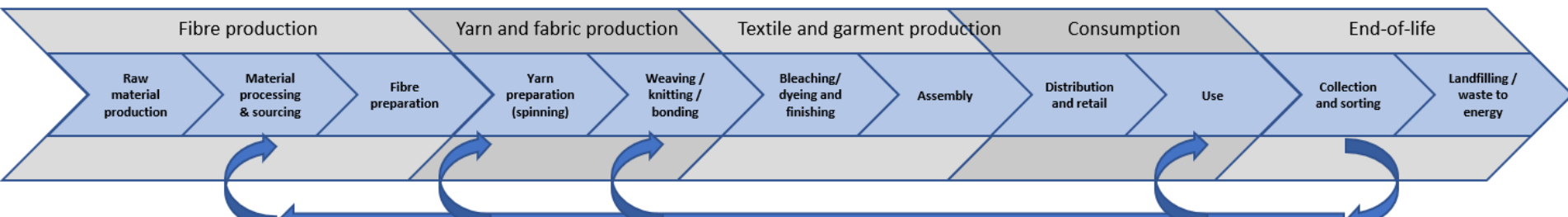
wet finishing process

- coal-based energy
- chemicals & water pollution

washing & drying

- electricity
- water
- detergent
- microfibres

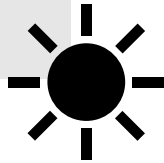
impact relatively low, but significant resource and economic loss (only 13% recycled)
→ loss of potential to decrease impacts across all stages



Environmental Impacts

Climate Change

greatest potential in reduction in climate impact by **extending the useful life of clothes** and **changing laundry practices**



Water Resources

raw material production, textile production and use highest in terms of freshwater use
water scarcity footprint varies per country (e.g. China 34% as cotton grower and high share of yarn and textile production)



Ecosystem Quality

cotton cultivation and **wet processing** (use of resources and agrochemicals), and textile **finishing** and **use** phase (high fossil energy use) hotspots



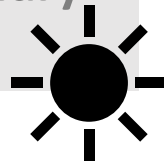
Land Use

fibre production stage has highest impact; primarily cotton and small contribution from cellulosic fibres; albeit natural fibres accounting 1/3 of global fibre production

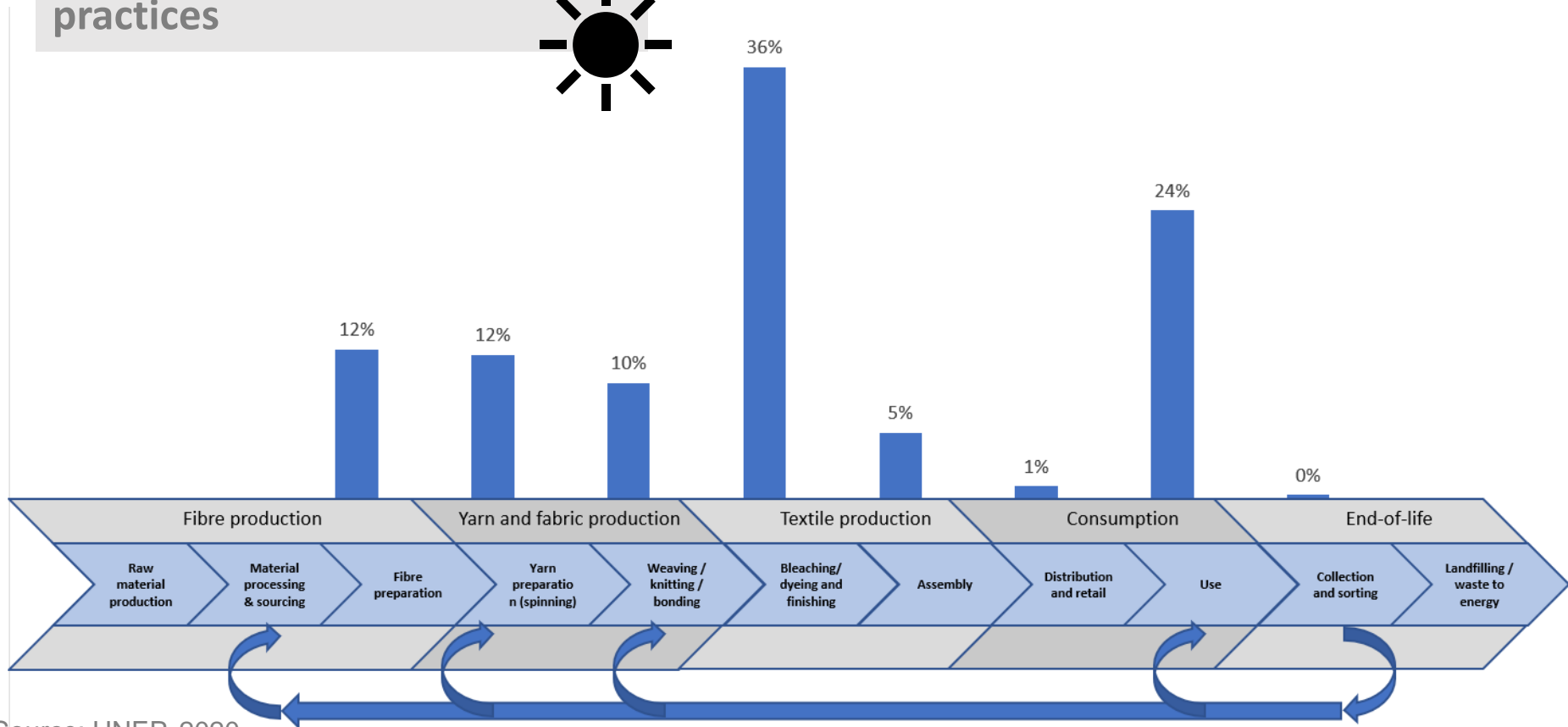


Climate impacts

greatest potential in reduction in climate impact by extending the useful life of clothes and changing laundry practices



> 3.3 billion mT of GHG/ year



Socio-economic impacts

Human Health Damage

cost of **occupational illnesses** due to poor **chemical** management estimated at €7 billion per year (by 2030);
extraction/burning of **fossil fuels** for textile finishing and use phase;
ingestion/inhalation of **microfibres** poses unassessed risks



Social Risks

fibre production stage contributes to up to 57% of social risks in general and 68% of **injury** risks;
highest social risks in **natural fibre** production;
excessive working time highest risk in garment **assembly**



Value Loss at End-of-life

annual material **loss of USD 100 billion**;
re-use of clothes shows **positive environmental** impact but can pose **risk** at importers' **local** textile producers and flood badly equipped **landfill** sites



Due to 3 common practices:

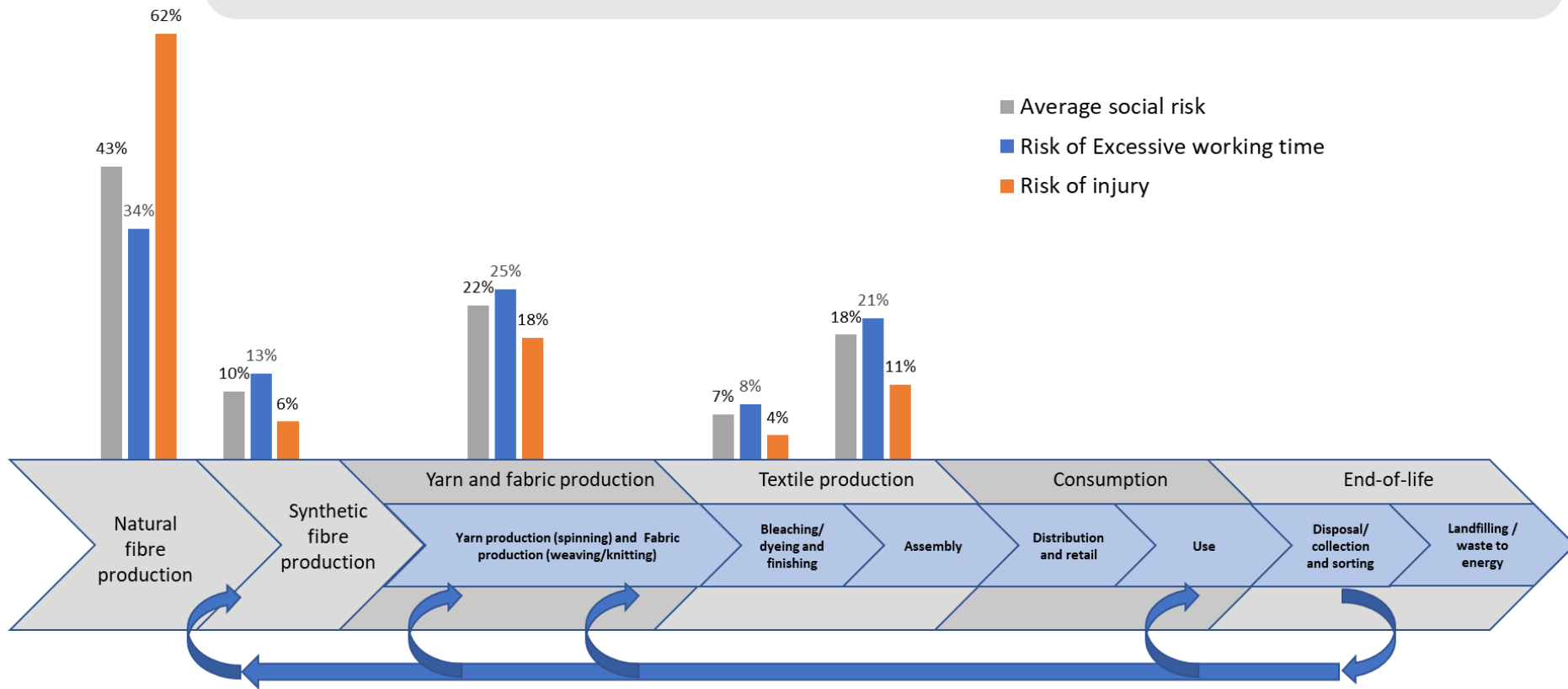
- demand for short lead times
- demand for flexibility
- continual search for lower prices



Social risks



Average social risk considers risk of child labour, corruption, forced labour, gender inequality, high conflict, fragility in the legal system, exposure to toxins and hazards, and sector average wage below country minimum wage





Summary of hotspots identified

fibre production

- fossil fuels (synthetic fibres)
- usage of land, water and agrichemicals (natural fibres)
- unsafe working conditions and fragility of legal system

yarn and fabric production

- no hotspots identified

textile production

- fossil fuel
- hazardous chemicals
- microfibre release
- unsafe working conditions and fragility of legal system

use phase

- electricity use in textiles care (fossil fuels)
- water use and microfibre release (washing)

end-of-life

- low recovery rates (high material value loss and non-renewable resource depletion)

Key needs, priority actions & next steps



Changes in consumption habits

Actions responding to **consumption-related gaps**, such as consumer information initiatives, raising awareness on products lifespan & alternatives, developing and incentivizing new business models that aim at increasing the lifespan



Collaboration & finance

Actions responding to **business models and innovation-related gaps**, for example policies and legislative frameworks that incentivize and enable companies to shift to new business models



Stronger governance

Actions responding to **production, technology and transparency gaps** including conducive policies, regulations & financing mechanisms as well as economic incentives

UNEP aims to provide leadership and convene partners to develop knowledge and solutions to advance towards sustainable and circular textile value chains, while supporting sound management of chemicals.

- **Online consultation workshop mid-2020**
- **Development of roadmap to guide key actions**

Transparency and traceability along the textile value chain

There is **lack of traceability** across globally dispersed textile value chains due to a large number of enterprises operating across a number of countries with varying commercial, legal and moral standards.



= critical enabling factors of practically all initiatives to improve the environmental and social sustainability of textile products

- Enables **accountability** along the textile value chain
- Enables **reliability of tools**, in order for
 - **producers** to make reliable claims about their products' sustainability performance
 - **consumers** to take informed decision (accurate information: origin of items, material and chemical contents, environmental and social impacts) and to exert influence on brands and retailers through consumption decisions and campaigns

→ Increasing recognition of **reputational risks** in their supply chains, coupled with **pressure from consumer** campaigns for greater transparency **and governments** for due diligence -> big brands and retailers taking greater responsibility over their supply chains

Thank you very much!
