United Nations Conference on Trade and Development

Multi-Year Expert Meeting on Commodities and Development

8-9 February 2021, Geneva

Harnessing the potential of Blockchain Technology for Sustainability and Transparency in Cotton Value Chains
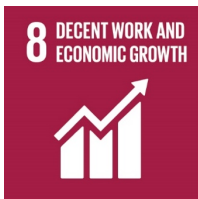
By

Maria Teresa Pisani, Economic Cooperation and Trade Division, UNECE

Harnessing the potential of Blockchain Technology for Sustainability and Transparency in Cotton Value Chains

Item 4: Greater Transparency in Commodity Markets
(b) Transparency initiatives in commodity markets

Maria Teresa Pisani, Economic Cooperation and Trade Division, UNECE
Multi-Year Expert Meeting on Commodities and Development Twelfth session
9th February 2021 2:00 pm - 3:50 pm

Rapidly developing policy solutions

UNECE UN/CEFACT

Global level

- **UN** 2030 Agena for Sustainable Development – UN Guiding Principles on Business and Human Rights
- **UN** Global Compact
- **ILO** Declaration on Fundamental Principles and Rights at Work and ILO Conventions on Labour Standards, Better Work
- **OECD** Guidelines for Multinational Enterprises - Guidelines for Due Diligence in Garment & Footwear

EU level

- **Green Deal**
- **Circular Economy Action Plan**
- Mandatory **Human Rights and Environmental Due Diligence** initiative
- Revision of **Non-Financial Reporting Directive**
- **Textile Strategy**
- **European Parliament** Resolution on the EU Flagship Initiative on the Garment Sector
- **European Economic and Social Committee (EESC)** Towards an EU Strategy for Sustainable Consumption

National level

- **France** Law on duty of vigilance by multinational companies
- **The Netherlands** Dutch Agreement on Sustainable Textileand
- **Germany** preparing/implementing due diligence legislation applying to the sector
- **UK** Modern Slavery Act
- **US** Textile Product Identification Act
- **Australia** Modern Slavery Act
- **India** Indian Companies Act

How can economic operators along the supply chain implement these policies practically & effectively?

Minimizing risks and costs, complying to voluntary and regulatory requirements, responding to social demand….

Calls to Action Post-COVID:

- **ILO COVID-19**: Action in the Global Garment Industry
- **WFF** Open Letter
- Global Social Partners Call to Action
- 26 companies, business associations, and initiatives make joint call for EU mandatory human rights & environmental due diligence

8 DECENT WORK AND ECONOMIC GROWTH

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

17 PARTNERSHIPS FOR THE GOALS

Enhancing Transparency and Traceability for Sustainable Value Chains in the Garment and Footwear Industry

O1. POLICY DIALOGUE PLATFORM, POLICY RECOMMENDATION & CALL TO ACTION
Why and how to enable and scale-up traceability systems?

O2. TRACEABILITY STANDARD & IMPLEMENTATION GUIDELINES
What to trace and how to trace it in value chains?

O3. BLOCKCHAIN PILOT SOLUTIONS FOR SPECIFIC FIBERS AND MATERIALS
How to anchor claims to products? For Cotton/Leather/Synthetic/Wool&Cashmere

In partnership with   International Trade Centre   ILO

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European Commission

Enhancing Transparency and Traceability for Sustainable Value Chains in the Garment and Footwear Industry

RECOMMENDATIONS

Policy Actions, Norms & Standards

a) Harmonized policies and regulations for **policy coherence**
b) **Minimum levels of traceability**, from raw materials sourcing, for products, processes and facilities
c) Companies' efforts to embrace **higher transparency**, e.g. names/addresses of suppliers' factories, and sharing of info on sustainability performance
d) reduced implementation burden through use of **international standards** and use of **existing data**

Incentives

e) Economic and fiscal
f) **Non financial**: sustainable **procurement**, fast **customs clearance**, specialized **training**, IT investment and **technology transfer**, **non-financial reporting** requirements, public visibility, **peer learning**

Research & Development: i. Sustainability/circularity production and consumption processes ii. Provenance and authenticity tracing solutions for products, iii. Increased products' lifespan iv. Sustainable material, v. Recycling , reusing, redesigning

Awareness and education: i. Informed choices, ii. Awareness of the shared responsibility, iii. Increase demand for sustainable materials, products, processes

Multi-stakeholder collaborative initiatives: i. Global open-source knowledge platform, ii. Multi-stakeholder policy dialogues, iii. Pilot projects for innovative approaches and advanced technologies

Enhancing Transparency and Traceability for Sustainable Value Chains in the Garment and Footwear Industry

| Origin/Location | Economic Operator | Composition/Specification | Input/Output |

Product   **Process**   **Facility**

Environment   **Social**   **Health**

From raw material production, through manufacturing and branding, to consumption and post-consumption

Input (Chemical/Pesticides)
Water
Energy
CO_2
Soil
Air
Thermic
Noise
Biodiversity
Deforestation
Habitat
Waste/End-of-life
Animal Welfare

Child labour
Forced Labour
Land Use
Work & Social protection
Trade Unions & Collective bargaining
Sexual harassment
Gender inequality
Discrimination
Homeworkers

Health
Safety

Permits
Contracts
Compliance to legislation/regulations

Management /Administration
Quality
Inspections /Certificates

Enabler

Data component

Characteristic

Requirement
Value

Observation
Actual Value

Evaluation Criteria
Degree of fulfilment
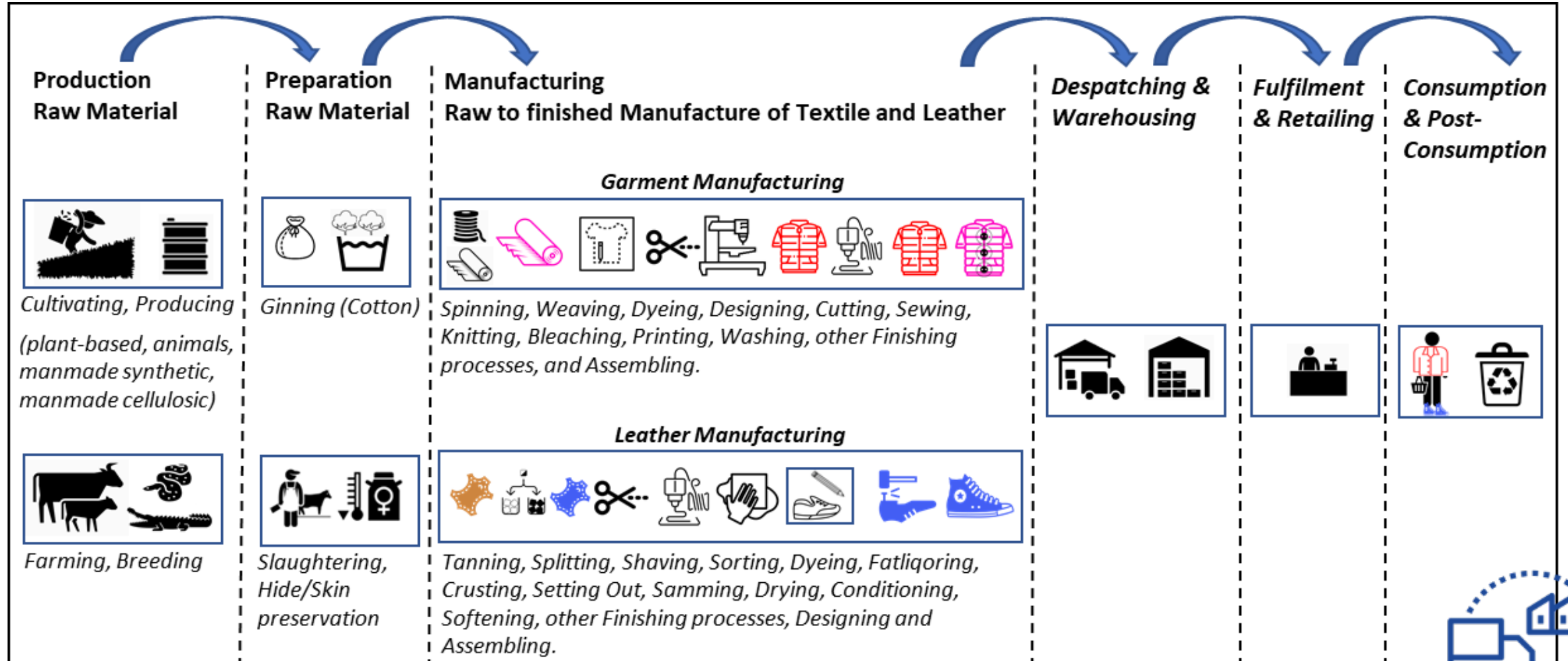
What we trace and assess

Enhancing Transparency and Traceability for Sustainable Value Chains in the Garment and Footwear Industry

Production Raw Material

Cultivating, Producing

(plant-based, animals, manmade synthetic, manmade cellulosic)

Farming, Breeding

Preparation Raw Material

Ginning (Cotton)

Slaughtering, Hide/Skin preservation

Manufacturing Raw to finished Manufacture of Textile and Leather

Garment Manufacturing

Spinning, Weaving, Dyeing, Designing, Cutting, Sewing, Knitting, Bleaching, Printing, Washing, other Finishing processes, and Assembling.

Leather Manufacturing

Tanning, Splitting, Shaving, Sorting, Dyeing, Fatliqoring, Crusting, Setting Out, Samming, Drying, Conditioning, Softening, other Finishing processes, Designing and Assembling.

Despatching & Warehousing

Fulfilment & Retailing

Consumption & Post-Consumption

The Pilot Project – The blockchain pilot's main deliverables

1. Proof of Concept (PoC) for a transparency and traceability blockchain-based system
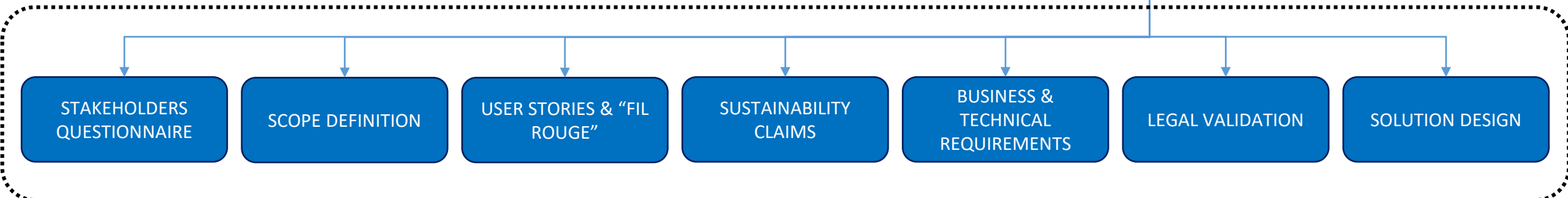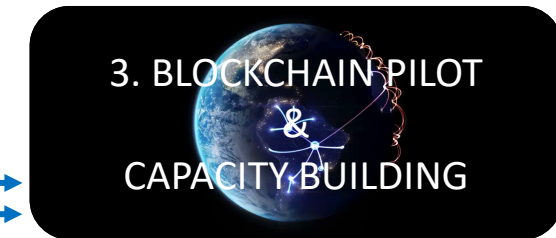
2. Solution to disclose sustainability claims of all supply chain partners for textile and leather products

3. Brands, manufacturers, farmers and certifiers to test a blockchain-based system

Sustainable Egyptian Cotton
- Organic cultivation
- Better Cotton Pilot and scale up BCI
- Premium quality
- GMO Free
- Biocontrolled

Sustainable Industrial Processes, Traceability and Transparency
- Promoting social compliance
- Enhancing cleaner production, chemical and wastewater managment

Circular Economy
- Recycling practices
- Waste reduction
- Circular design

Innovation and Green Technologies
- Promoting value addition
- Enhancing technology transfer
- Investing in green technologies

Strategic Cooperation
- Business alliances along the value chain
- International stakeholders support

Skills for Sustainability
- Develop skills of youth for a sustainable cotton value chain

1. POLICY RECOMMENDATION

2. TRACEABILITY STANDARD

- Framework
- Guidelines
- Action Plan

- Business Process Description
- Activity Diagrams
- Business Requirements Specifications
- Data Model

3. BLOCKCHAIN PILOT & CAPACITY BUILDING

| STAKEHOLDERS QUESTIONNAIRE | SCOPE DEFINITION | USER STORIES & "FIL ROUGE" | SUSTAINABILITY CLAIMS | BUSINESS & TECHNICAL REQUIREMENTS | LEGAL VALIDATION | SOLUTION DESIGN |

Pilot Concept to be implemented

UNECE UN/CEFACT

Pilot #1 - Implementing a blockchain technology for traceability and due diligence in the cotton value chain in support of a circular economy

Haelixa

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WEBA
Switzerland

— elvy —

OEKO-TEX®
CONFIDENCE IN TEXTILES

HUGO BOSS

Vivienne Westwood

WHO

Ø ZDHC
ROADMAP TO ZERO

FONDAZIONE PISTOLETTO CITTADELLARTE BIELLA

FILMAR NETWORK

SUPSI

Albini GROUP

UNECE-UN/CEFACT & Partners

- **22** pilot experts
- **2** brands
- **4** manufacturers/ **1** farmers' association
- **4** certification bodies
- **2** academia/think tank
- **1** DNA tracer

Where ◈

5 countries
- Egypt
- Germany
- Switzerland
- Italy
- UK

Enhancing Transparency and Traceability for Sustainable Value Chains in the Garment and Footwear Industry

UNECE-UN/CEFACT International Framework Initiative

Policy coherence & **wide-industry** engagement

A **standardised approach** for an **interoperable international standard**

Transparency & Traceability for

+ Reliable **product information**

+Increased **accountability** on sustainability claims

+Risk-management

+Advancing **Responsible Consumption and Production**

Supporting role of **advanced technologies** e.g. Blockchain

Thank You!
Questions?

Maria Teresa Pisani
Economic Affairs Officer
Economic Cooperation and Trade Division
United Nations Economic Commission for Europe
maria-teresa.pisani@un.org

Link to Project's webpage
https://unece.org/trade/traceability-sustainable-garment-and-footwear