Panel 3: Enabling sustainability in the beef & leather industry

3rd December 2021 – 10:10 -11:05 (Brazilian time)

Maria Teresa Pisani, Economic Cooperation and Trade Division, United Nations Economic Commission for Europe
The apparel and footwear industry represents 2.1 billion tons (4%) of global GHG emissions.

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

Current emissions breakdown – Apparel
- 15% fiber production
- 28% yarn preparation
- 36% fabric dying and finishing

Current emissions breakdown – Footwear
- 20% raw material extraction
- 18% processing
- 43% manufacturing

Available tools for monitoring and reporting
- ISO standards (14025, 14064 and 14067)
- Life Cycle Analysis (LCA) approaches
- Environment Product Declarations (EPDs)
- Product or Organization Environmental Footprint (PEF or OEF) reports


Abatement levers
- Switch from fossil-based fuels to energy from renewable sources
- Adoption of energy-saving processes
- Optimisation of logistics
- Energy-efficient maintenance of garments by households
- Substitution of fossil-based synthetics with bio-based synthetics and recycled ones

Global emissions

Abatement needed to keep on a 1.5 degrees path

Current emissions

Abatement needed

4%
Drivers for Traceability and Transparency
Enhancing Traceability and Transparency of Sustainable Value Chains in the Garment and Footwear Industry

1. Drivers

2. Actors/Enablers

3. UNECE toolbox

Social forces

- **Civil Society**
  - Plays an increasing role in demanding greater scrutiny of private sector actors and in driving demand for more sustainable products

Market forces

- **Consumers**
  - Ready to pay a premium for products with greater transparency
  - Will boycott/punish products and investors with opaque credentials

- **Industry**
  - Aware of reputational risk
  - Strive to be ahead of regulation to reduce compliance risk
  - Sees opportunity in demand growth for sustainable products

- **Investors**
  - Increasingly shifting their portfolios towards ESG investments
  - Wary of exposure to planetary boundaries and stranded assets

Regulatory forces

- **Law makers**
  - Responding to civil society demand for greater transparency and traceability

Technological forces

- **Technology**
  - New digital and physical technological innovation reduce barriers and costs

Policy Model

Business & Data Model

Technology Model

1. Drivers
2. Actors/Enablers
3. UNECE toolbox

United for greater traceability, transparency and circularity in the garment and footwear sector
Blockchain Pilots

Harnessing the potential of blockchain technology for sustainability and due diligence in cotton value chains

**Cotton Pilot**
- Cooperatives/farms/traders: 2
- Manufacturers/suppliers: 4
- Brands/Retailers: 2
- Standard-setting bodies: 4
- Academia-think tanks/Plat.: 1
- DNA marker provider: 3

**UNECE Pilot Leadership**
- > 60 Pilot partners
- End-to-end VC traceability
- 18 Countries in Africa, Asia, Europe, North and South America

**Leather Pilot**
- Raw Material prov./traders: 4
- Manufacturers/suppliers: 4
- Brands/Retailers: 5
- Certification bodies: 2
- Industry associations: 4
- Ceramic marker provider: 1
- NGOs: 1
- IOs: 1
- R&D and testing centre: 1
SELECTION OF PRODUCTS AND CLAIMS TO BE TESTED

SLIM SHIRT
Season SS21

CLASSIC TAPERED JEANS
Season SS21

CLAIMS

Traceability of Origin

Organic Content

Recycled Content

Chemical Compliance
The flow of data – Organic T-shirt

**Value Chain**

1. Planting and cultivation of cotton
2. Cotton harvest identification & transfer from farmer to ginner
3. Ginning & transfer to spinner
4. Spinning or transfer to dyer, bleacher, washer
5. Dyeing, bleaching, washing & transfer to weaver
6. Weaving & transfer to fabric finisher
7. Fabric finishing, other treatments & transfer to manufacturer
8. Garment or product production & transfer to ennoblement
9. Product Enoblement & packaging and transfer to “retailer”
10. Placement of product in stores or online for sale
11. Consumption and disposal
12. Post consumption recycling

**Companies**

- Jess Smith and Sons Cotton LLC + Allenberg cotton co.
- Anhui Humao Textile CO. LTD
- Cotonificio Albini S.P.A.
- Cotonificio Albini + Diefurft SRO
- Brebbia Divisione del Cotonificio Albini S.P.A.
- Cotonificio Albini S.P.A.
- Poletti SRL
- Vivienne Westwood Srl

**Traceability evidences**

- Commercial Invoice
- Commercial Invoice
- Commercial Invoice
- Shipping Note
- Shipping Note
- Shipping Note
- Commercial Invoice
- Shipping Note
- Shipping Note

**Transparency evidences**

- 1. GOTS certificate
- 1. GOTS certificate
- 1. GOTS certificate
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- 1. GOTS certificate

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EU-BRAZIL Sustainable Beef and Leather Value Chain Dialogue
Panel 3 Enabling sustainability in the beef & leather industry

Key Challenges for Traceability and Transparency

Focus on Brazil and Deforestation
➢ Majority of tanneries can only trace their material back to the slaughterhouse

➢ The risk of deforestation lies in the opaque process from birth farm to slaughterhouse feeder farm or trader.

➢ Cattle can exchange hands a number of times before ending up registered in a legitimate farm from which sale to the slaughterhouse takes place.
Challenges to achieving Traceability and Transparency

**Complex value chains** with geographic variances in manufacture

**No standard transparency or traceability system** that is recognised globally

**No legislative requirements** around traceability or sourcing of raw material

**Commercial Sensitivity** and need to protect valuable raw material sourcing information and customer advantage

**Outdated Thought Processes** that as leather is a by-product of the meat industry, there is no responsibility for animal welfare or environmental impact before the slaughterhouse.

**No link pre and post slaughter** with theoretically the only region of the world currently that could link traceability being Brazil – due to enhanced systems already in place to combat deforestation / land conversion
Through discussions with major leather manufacturers based in Brazil, who really are committed to finding solutions, the key elements for success are:

- Multi-stakeholder cooperation – Government, Industry (including farmers, meatpackers and tanneries), Associations and NGOs. *Without government support, the likelihood of success is small.*
- Incentivization to ensure that upstream ranchers do not need to increase land clearance for continued growth.
- Education on better practices to maximize yield and encourage re-growth and reintroduction of native species.
- On the ground independent support to assist farmers with infrastructure and equipment.
- An electronic system that utilizes existing mechanisms like the GTA.

**NB:** This set of measures is something that SLF is already in discussion about with organisations in Brazil and a visit is planned for January 2022 to further the talks.

Solutions

UNECE Project to enhance traceability and transparency can provide the solution to this through the guidelines, standards and piloting industry’s use cases.
EU-BRAZIL Sustainable Beef and Leather Value Chain Dialogue
Panel 3 Enabling sustainability in the beef & leather industry

UNECE Blockchain pilots for sustainability and due diligence in leather value chains

Andrea Redaelli, Corporate Portfolio & Project manager, digital innovation & UNECE project expert
Practical implementation of the UNECE TT toolbox

1. POLICY RECOMMENDATION
   - Framework
   - Guidelines

2a. TEXTILE TRACEABILITY STANDARD
   - Business Process Description
   - Activity Diagrams
   - Business Requirements Specifications
   - Data Model

2b. LEATHER TRACEABILITY STANDARD

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
The technology model for TT and due diligence in textile and leather

The potential of advanced technologies to advance traceability, transparency and due diligence focus on Blockchain/DLT

- **FARM** cotton cultivation
- **HARVEST** collection of cotton bales
- **GINNING** seed and contaminations are removed
- **SPINNING** fibres are spun into yarn
- **DYEING** yarn is dyed to obtain preferred colour
- **WEAVING** premium quality fabric is produced
- **FINISHING** treatment to smoothen and release fabric with desired properties
- **SEWING** putting the garment together
- **BRAND & RETAILER** in stores

### DISTRIBUTED LEDGER TECHNOLOGY

- **IMMUTABLE DATA SHARING**
- **MULTIPLE POINTS**
- **FRAGMENTED ENVIRONMENTS**
- **EASY SCALABILITY**

How Blockchain supports:
- Digital solution that reduces distances:
  - Business Continuity and Shared Ledger - Trust
  - High level of penetration and acceptance (also via smartphone)
  - Technology to offer the transparency: a distributed database,
  - Timestamp on activities and "body of evidence" (automation, digital-physical, IoT)
  - Data sensitivity/privacy topic \(\rightarrow\) regulation as balance between transparency and data confidentiality
- Governance

**Why Blockchain**
Traceability and Transparency concept

**TRACEABILITY LAYER**

**MATERIAL/PRODUCT VALUE CHAIN**

- RAW MATERIAL (A) ➔ FIBERS (B) ➔ FABRIC (C) ➔ FINISHED PRODUCT (D) ➔ (...)

**TRANSPARENCY LAYER**

**BUSINESS VALUE CHAIN**

- COMPANY (A) ➔ COMPANY (B) ➔ COMPANY (C) ➔ COMPANY (D) ➔ (...)

**TRACEABILITY MADE BY “ORIGIN”**

- Evidence: Business Transactions (Ownership) documents (e.g. Invoice, Shipping List, etc.)

**SUPPORTED BY “SUSTAINABILITY CLAIMS”**

- Evidence: Claims Standard Certificates (e.g. Material Content, Chemicals, Environment, Social, OEKOTEX, GOTS, ZDHC etc.)

**TRANSPARENCY MADE BY “VALUE CHAIN PARTNER” IDENTIFICATION**

- Evidence: Business Transaction documents (e.g. Contract, Invoice, etc.)

United for greater traceability, transparency and circularity in the garment and footwear sector
Claims concept from the Recommendation No.46

Piloting UNECE traceability framework in a blockchain environment

A high-level statement about a characteristic of a product, or about a process or an organization associated with that product

**Claim**

Source: UNECE Policy Recommendation, Guidelines

A claim that covers one or multiple sustainability dimensions (economic, environmental, social)

**Sustainability Claim**

Source: UN Environment Guidelines for Providing Product Sustainability Information

- Hazardous chemicals
- Pesticide and fertilizer use
- Water use
- Water pollution and wastewater management
- Waste production and management
- End-of-life

- Child labour
  - Forced/compulsory labour
  - Trade unions and collective bargaining rights
  - Discrimination
  - Sexual harassment
  - Exploitation of home workers
  - Working conditions

- Unsafe workplaces and workpractices
- Inadequate personal protective equipment

- Bribery and corruption
- Land rights and community welfare
- Animal welfare

UNECE Policy Recommendation n. 46
Type of evidences to substantiate the claims

Data Collection

1. Information on Traceable Assets, Claims and Partners
2. Documents related to Transactions
3. Documents related to Sustainability Claims

Shipping Notes
Commercial Invoices
Delivery Notes
Packing Lists
Transportation Documents

Certificates
Audit/Inspection Reports
Laboratory Test Results Reports
NGOs/Civil Society Attestations
Declarations

Traceability Evidences
Transparency Evidences

Piloting UNECE traceability framework in a blockchain environment
Adding an assurance level to the evidences

Piloting UNECE traceability framework in a blockchain environment

Assessment Types
- Self Declared
- Self Assessed
- Second Party Verified
- Third Party Certified

Levels of Assurance
- Highest Level
1. UNECE TT BC platform
   http://www.unecettbcpilot.ch/

2. Welcome on Board

3. TT matrix data collection template


5. Memorandum of Understanding
   Rules book for data management
Leather Value Chain: Scope

1. Selection of Sustainability Claims
   - Origin
   - Fibre content
   - Use of chemicals
   - Social and environmental performance (Legal trade, species protection, animal welfare)

2. Type of evidences to substantiate the claims

<table>
<thead>
<tr>
<th>TRACEABILITY EVIDENCES</th>
<th>TRANSPARENCY EVIDENCES</th>
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3. Phases tracked and traced with supporting documentary evidence
   - 1. Farming of Livestock
   - 2. Slaughter
   - 3. Preservation
   - 4. Tanning (raw to tanned)
   - 5. Splitting, shaving and sorting
   - 6. Retanning, fatliquoring and crusting
   - 7. Dyeing, setting out and sammying
   - 9. Product assembly
   - 10. Fulfilment & retail
   - 11. Post consumption

United for greater traceability, transparency and circularity in the garment and footwear sector
Results from the Pilot Questionnaire.

Just 5 organisations were engaged at that point.
Objective
Responsible Sourcing, Environmental good practice

Claim on raw material origin: non-deforestation cattle

CLAIM ON ORIGIN OF RAW MATERIAL

Traceable asset
The leather of this Jacket

Claim Statement
Origin known to be from farms that are not involved in deforestation

Verification Criteria
Traceability Certified

Material → Leather → Evidence

100% Traceability Certified

Assessment Type → Third Party Certified

Example CLAIM

Link your claim to your User Story

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Leather Value Chain Blockchain Pilot

23 Leather Partners
5 – Brands
6 – Manufacturers
2 – Traders
2 – Suppliers
1 – NGO
3 – Industry Associations
4 – Certifiers

Material Types
Bovine (Cow and Calf)
Ovine (Sheep and Goat)
Exotics (Alligator)

Countries
Denmark – 1
France – 2
Germany – 1
Italy – 4
Netherlands – 2
Switzerland - 2
UK – 4
USA – 6
Europe – 1

Value Chain Coverage
Farm to Finished Product

United for greater traceability, transparency and circularity in the garment and footwear sector
The technology model for TT and due diligence in textile and leather

Key aspects for success of a TT initiative

<table>
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<th>VALUE CHAIN ALIGNMENT:</th>
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<tr>
<td>➢ Identification and early engagement of upstream and downstream partners;</td>
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<td>➢ Consider the granularity level and complexity of the value chain selected</td>
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<th>KNOWLEDGE SHARING:</th>
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<tr>
<td>➢ Training of partners/value chain suppliers and empowering all value chain actors;</td>
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<td>➢ Terminology and process understanding;</td>
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<td>➢ Build Knowledge and Trust upon long-lasting partnerships and win-win cooperation;</td>
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<td>➢ Central coordination vs. Self-coordination of the activities along a Value Chain (B2B)</td>
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<tr>
<td>➢ (UNECE Secretariat) Neutral moderator of business operational activities</td>
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<td>❑ Data Sharing and Immutability</td>
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<td>❑ Data Confidentiality and Privacy vs. Data Transparency Levels</td>
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<td>❑ Open-source approach to share information</td>
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<td>❑ Academy as an independent technology provider</td>
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Reaching out – The Sustainability Pledge

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United for greater traceability, transparency and circularity in the garment and footwear sector.
Towards an enabling environment

- Allows tracking of products back to raw material extraction and processing
- Enables manufacturers to create product digital and physical twins

- Benefit market surveillance and customs authorities
- Make reliable information available to policy makers
- Link incentives to sustainability performance

- Allow citizens to have access to relevant and verified product information
- Enables services related to circular business models

#TheSustainabilityPledge
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