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

Policy recommendation & Guidelines:
Architecture of traceability framework

Virtual Multi-Stakeholder Policy Dialogue 27-28 April 2020
Accelerating action for Sustainable and Circular Value Chains in Garment & Footwear

Dr. Rudrajeet Pal
Associate Professor, Textile Value Chain Management, Swedish School of Textiles, University of Borås, Sweden
Enhancing Transparency and Traceability for Sustainable Value Chains in Garment and Footwear

Key points to consider in:
I. General system architecture
II. Policy Claim
III. Traceable Assets
IV. Entry and Exit Points
V. Traceability Conditions and Rules
VI. Certification and Audit practices

--- not covered in this presentation
I. Traceability system architecture: General requirements

Components of Traceability System

- Policy Claim
- Traceable Asset
- Entry/Exit Points
- Transformation Rules
- Certification & Auditing Agency

Key underlying data management requirement

- **Identify** all data that would be required for future from traceability context
- **Record** the identified traceability data
- **Communicate** the necessary traceability data with supply chain partners (stakeholders) with the flow of products or services
- **Manage** long term **links** for exchange of request of traceability data (preferred in an automated way)
In accordance with ECE/TRADE/429

I. Traceability system architecture: Recommendations to policy- & decision- makers

- **Monitoring and reporting all manufacturing batches and logistic units, throughout their transformation or shipment process.**
  - Main criteria related to the manufacturing batches should generally be reported.
    - E.g. date/period of production or transformation process, country, factory, production and packaging lines, raw material batches, social and environmental footprints etc. For monitoring logistics units, the supply chain must record shipping containers, storage sites and conditions.
  - Information must be clearly marked or attached to the product via unique code.
    - E.g. Manufacturing batch number, SSCC (Standardized Shipping Container Code), GTIN (Global Trade Item Number), GLN (Global Location Number), or a combination of these.

- **Recording of successive links between manufacturing batches and logistics units in the supply chain.**
  - Ensure continuous monitoring and recording of links.
    - E.g. Between: (i) different manufacturing batches, (ii) manufacturing batches and logistic units, and (iii) different logistic units, throughout the transformation processes and shipment in order to ensure history of any traded unit.
  - Supply chain visibility for each batch or unit in every subsequent stage.
    - E.g. In multipacks, heterogeneous or non-standard batches.

- **Predefining the information to be recorded during the transformation process, and throughout the entire supply chain.**
  - Continuously monitor, record and systematically communicate between partners, relevant data at each process stage in accordance to the company’s objective.
    - E.g. Data related to: (i) Traded item and logistic unit, and their impact, (ii) Commercial information related to product delivery, (iii) Relevant legal information, (iv) Any other traceability information defined by the sector or associated/interacting parties.

- **Associating flow of information with the physical flow of the products.**
  - Secure integration between physical product and associated information levels.
II. Policy Claim: Recommendations to policy- & decision- makers

“A policy claim is a high level statement, usually about an intangible feature or a process that is associated with a traceable asset that requires tracing of a supply chain and is supported by data collection”

**Objective**
A clear objective connected to the purpose of tracing/tracking the traded unit, including drivers for implementing them.

An objective sets the requirement and summarizes the specific accomplishments to be achieved by fulfilling the proposed Policy Claim.

**Traceable Asset**
Description of the unit of observation for the proposed claim.

A traceable asset is a physical product as a whole or its definite component, or its traded unit to be traced/tracked in the form of a manufacturing batch or a logistic unit.

A definite segment for the operating activities or processes connected to the traceable asset should be provided.

**Claimed state**
Description of the unit of analysis for the proposed claim.

A unit of analysis should be defined in terms of physical characteristics or process connected to the proposed objective and the unit of observation.

**Verification criteria**
A statement of verification, along with an indicative mechanism to verify.

Documented proof that an auditor will be able to verify against.

In accordance with ECE/TRADE/429
II. Policy Claim: Recommendations to policy- & decision- makers

#1 Example of Policy Claim

(From Brand X) imported RGM from full package suppliers in (e.g. Bangladesh) contains 100% organic cotton fabric and are sourced according to (e.g. Textile Exchange or equivalent) content claimed standards for sustainable procurement.

#2 Example of Policy Claim

(From Brand Y) imported kitnewears contains ethically grown and traded cotton from (e.g. Cambodia) and are obtained in compliance with ILO fundamental labour standards for ensuring CSR.

- Objective
- Traceable Asset
- Claimed state
- Verification criteria
III. Traceable Assets

A traceable asset must be attributed with an identifier in the form of numeric or alphanumeric codes which, either on its own or together with other relevant codes such as GLN, GTN etc., shall allow tracing/tracking the traceable asset uniquely at any point of time.

“Traceable asset is referred as the unit that one wants to trace or record information in a traceability system. In a garment or footwear value chain, it can refer to any manufacturing batch or logistic unit of both raw materials or intermediary and finished products.

In line with FIAM/C1123
III. Traceable asset Identifiers: Recommendations to policy- & decision-

- Level of granularity of recording the traceable asset must be specified.
  - Granularity determines the physical size of the traceable asset, i.e. how aggregated the traceable asset is.
  - Granularity levels must be prescribed in line with the different supply chain traceability types (ECE/TRADE/429) (product segregation, mass balance, book and claim), depending upon the objective set in the policy claim. High granularity means higher cost for monitoring precision, both internally and along the chain (transformation process and shipment).

- Referential integrity must be maintained in connection to the associated policy claim.
  - Effectiveness of the traceability system depends upon maintaining referential integrity, if a unique identifier is assigned to one traceable asset. This should be ensured either internally in a company or by transacting trading partners (e.g. through internal production batch number or trading unit number), or together with other relevant codes such as GLN, GTN.

- All links of a particular traceable asset along the value chain must be established.
  - All transformations through which a given traceable asset passes through should be recorded such that they can be associated with its “ancestors”, i.e. where the given traceable asset came from, and with its “progeny”, i.e. where it went it, in context to different scenarios for split, join and merge in the value chain.
  - Additionally for monitoring referential integrity of the traceable asset identifier along the value chain, links must be established between traceable asset identifiers and company identification and physical places in line with EAN-UCC standard.

For example, a yarn manufacturer can typically choose whether they assign a traceable asset to a new production batch every day, every shift (e.g. 2-3 times per day) or to every bobbin, in a particular ring frame machine.
IV. Entry and Exit Points and Rules: Recommendations to policy- & decision- makers for its monitoring and reporting

**Entry/Exit Point:** Activity/location where the traceable asset enters and leaves the traceability system

Both traceability system boundary and traceability practices must be reported and monitored together with the entry-exit points.

- In connection to the policy claim, a clear demarcation must be set for authorized activity or location where the traceable asset enters and leaves the traceability system.

- In connection to verification of a specific policy claim, the within-boundary transformation and logistics processes (node) should be made visible. Visibility must be provided at each node in terms of locational identity, timestamp for entry-exit, traceable asset identity, information systems for data interchange, and types of recorded data elements.
Thanks Questions?

Dr. Rudrajeet Pal
rudrajeet.pal@hb.se