Enhancing Transparency and Traceability of Sustainable Value Chains

The Leather Sector

Dr. Hakan Karaosman
Researcher, Fashion Supply Chain Sustainability
30.10.2019, London

Temperature Anomalies by Country
Years 1880 - 2017

2017

-2.0 °C -1.0 °C +0.0 °C +1.0 °C +2.0 °C

Afghanistan +1.5 °C	Albania +1.1 °C	Algeria +1.4 °C	Andorra +1.5 °C	Angola +0.9 °C	Antarctica +0.5 °C	Argentina +1.0 °C	Armenia +1.1 °C	Australia +1.1 °C	Austria +1.5 °C	Azerbaijan +1.2 °C	Bahamas, The +0.7 °C	Bahrain +1.8 °C	Bangladesh +0.6 °C	Barbados +0.8 °C	Belarus +1.6 °C
Belize +0.9 °C	Benin +1.2 °C	Bhutan +0.7 °C	Bolivia +1.4 °C	Bosnia and H. +1.3 °C	Botswana +0.8 °C	Brazil +1.3 °C	Brunei +0.9 °C	Bulgaria +1.1 °C	Burkina Faso +1.1 °C	Burundi +1.5 °C	Cabo Verde +0.9 °C	Cambodia +0.9 °C	Cameroon +1.0 °C	Canada +1.5 °C	Central African Rep. +0.9 °C
Chad +0.9 °C	Chile +0.9 °C	China +1.5 °C	Colombia +1.1 °C	Comoros +0.9 °C	Congo, DR +1.0 °C	Congo, R +0.8 °C	Costa Rica +0.7 °C	Croatia +1.4 °C	Cuba +0.9 °C	Cyprus +1.0 °C	Czechia +1.5 °C	Côte d'Ivoire +1.2 °C	Denmark +1.4 °C	Djibouti +1.1 °C	Dominica +0.8 °C
Dominican Republic +0.7 °C	Ecuador +1.0 °C	Egypt, Arab Rep. +1.0 °C	El Salvador +0.8 °C	Equatorial Guinea +0.9 °C	Eritrea +1.1 °C	Estonia +1.5 °C	eSwatini +0.7 °C	Ethiopia +1.2 °C	Fiji +0.8 °C	Finland +1.4 °C	France +1.3 °C	Gabon +0.9 °C	Gambia, The +1.3 °C	Georgia +1.2 °C	Germany +1.5 °C
Ghana +1.2 °C	Greece +0.9 °C	Grenada +0.8 °C	Guatemala +1.0 °C	Guinea +1.2 °C	Guinea-Bissau +1.2 °C	Guyana +0.8 °C	Haiti +0.7 °C	Honduras +0.9 °C	Hungary +1.4 °C	Iceland +1.2 °C	India +0.9 °C	Indonesia +0.8 °C	Iran, Islamic Rep. +1.4 °C	Iraq +1.3 °C	Ireland +1.1 °C
Israel +1.1 °C	Italy +1.4 °C	Jamaica +0.7 °C	Japan +0.7 °C	Jordan +1.2 °C	Kazakhstan +1.7 °C	Kenya +1.3 °C	Kiribati +0.3 °C	Korea, DPR +1.6 °C	Korea +1.2 °C	Kosovo +1.2 °C	Kuwait +1.7 °C	Kyrgyz Republic +1.5 °C	Lao PDR +0.9 °C	Latvia +1.6 °C	Lebanon +1.1 °C
Lesotho +0.8 °C	Liberia +1.1 °C	Libya +0.9 °C	Liechtenstein +1.5 °C	Lithuania +1.6 °C	Luxembourg +1.5 °C	Macedonia, FYR +1.1 °C	Madagascar +1.0 °C	Malawi +0.9 °C	Malaysia +0.9 °C	Maldives +0.7 °C	Mali +1.2 °C	Malta +0.9 °C	Marshall Islands +0.7 °C	Mauritania +1.4 °C	Mauritius +1.2 °C
Mexico +1.5 °C	Micronesia +1.0 °C	Moldova +1.3 °C	Monaco +1.5 °C	Mongolia +2.4 °C	Montenegro +1.3 °C	Morocco +1.7 °C	Mozambique +0.8 °C	Myanmar +0.7 °C	Namibia +1.0 °C	Nauru +0.8 °C	Nepal +0.8 °C	Netherlands +1.5 °C	New Zealand +0.7 °C	Nicaragua +0.9 °C	Niger +0.9 °C
Nigeria +1.1 °C	Norway +1.5 °C	Oman +1.4 °C	Pakistan +1.3 °C	Palau +0.9 °C	Panama +0.6 °C	Papua New Guinea +0.9 °C	Paraguay +1.4 °C	Peru +1.2 °C	Philippines +0.9 °C	Poland +1.5 °C	Portugal +1.4 °C	Qatar +1.8 °C	Romania +1.3 °C	Russia +2.2 °C	Rwanda +1.5 °C
Samoa +0.7 °C	San Marino +1.4 °C	Sao Tome and P. +1.1 °C	Saudi Arabia +1.6 °C	Senegal +1.3 °C	Seychelles +0.9 °C	Sierra Leone +1.2 °C	Singapore +0.7 °C	Slovak Republic +1.5 °C	Slovenia +1.4 °C	Solomon Islands +1.0 °C	Somalia +1.1 °C	South Africa +0.8 °C	South Sudan +1.1 °C	Spain +1.5 °C	Sri Lanka +0.9 °C
St. Kitts and Nevis +0.7 °C	St. Lucia +0.8 °C	St. V. and the G. +0.8 °C	Sudan +1.0 °C	Suriname +0.8 °C	Sweden +1.4 °C	Switzerland +1.5 °C	Syria +1.1 °C	Taiwan +1.1 °C	Tajikistan +1.4 °C	Thailand +0.9 °C	Timor-Leste +0.6 °C	Togo +1.2 °C	Tonga +0.6 °C	Trinidad and Tobago +0.8 °C	Tunisia +1.4 °C
Turkey +1.0 °C	Turkmenistan +1.5 °C	Tuvalu +0.8 °C	Uganda +1.4 °C	Ukraine +1.5 °C	United Arab Emirates +1.8 °C	Uruguay +1.3 °C	USA +1.5 °C	Uzbekistan +1.6 °C	Vanuatu +1.0 °C	Venezuela, RB +1.0 °C	Vietnam +0.8 °C	Yemen, Rep. +1.4 °C	Zambia +0.9 °C	Zimbabwe +0.7 °C	

Data Source:
NASA GISS, GISTEMP Land-Ocean Temperature Index (LOTI), ERSSTv5, 1200km smoothing
https://data.giss.nasa.gov/gistemp/
Average of monthly temperature anomalies. GISTEMP base period 1951–1980.

UNECE

Setting the Scene

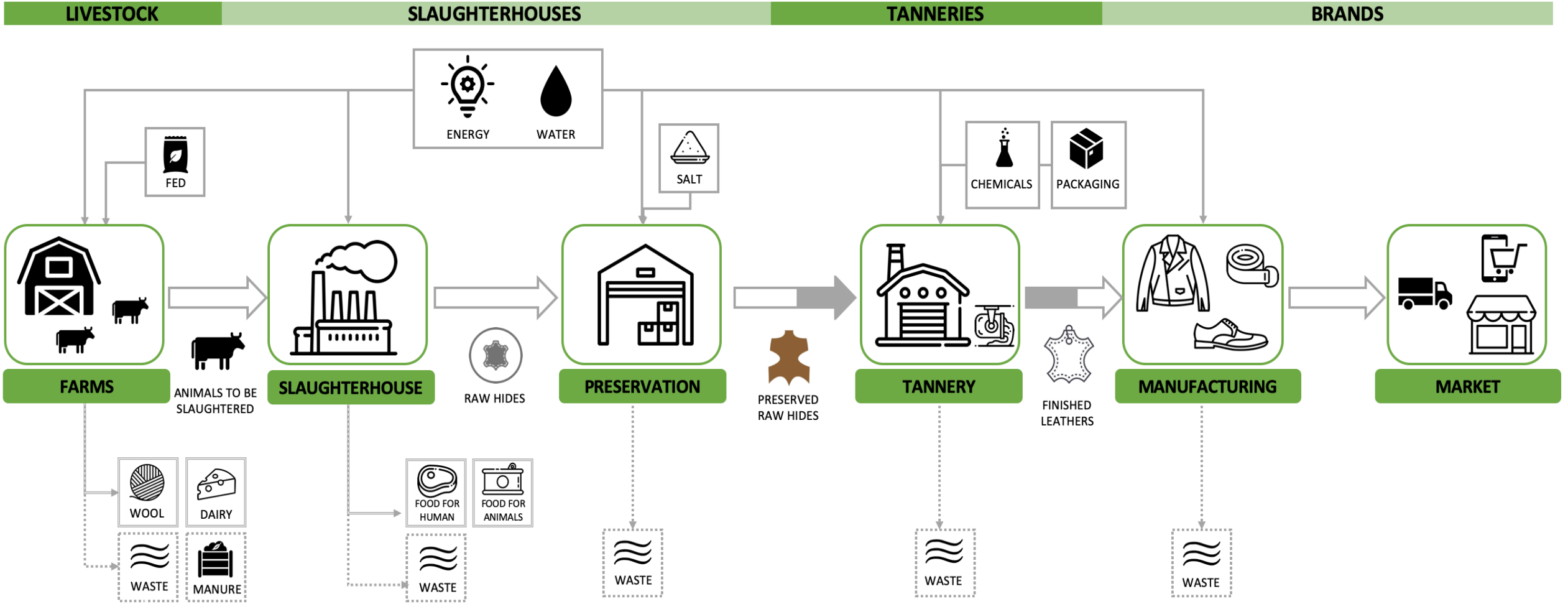
TRANSPARENCY & TRACEABILITY

- Companies must know what is happening in their supply chains because sustainability risks are located at **lower tier suppliers**[1]
- The most significant **GHG emissions** are mostly generated in raw material production stages[2]
- There are **trade-offs** between environmental and social sustainability practices[3]
- Consumers seek the **truth**!
- **Environmental** and **social management** are needed throughout the value chain

1. *Karaosman, H. et al. (2018) Behind the runway: Extending sustainability in luxury fashion supply chains*
2. *Sadowski, M. et al. (2019) Apparel and footwear sector, Science-based targets guidance*
3. *Marshall, D. et al. (2015) Production Planning & Control, 26(8), pp. 673–690*

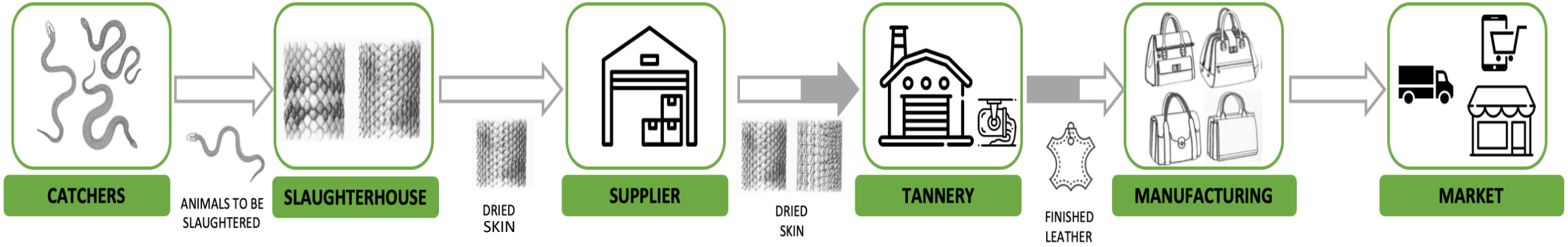
UNECE

A Leather Value Chain – *Livestock Animals*



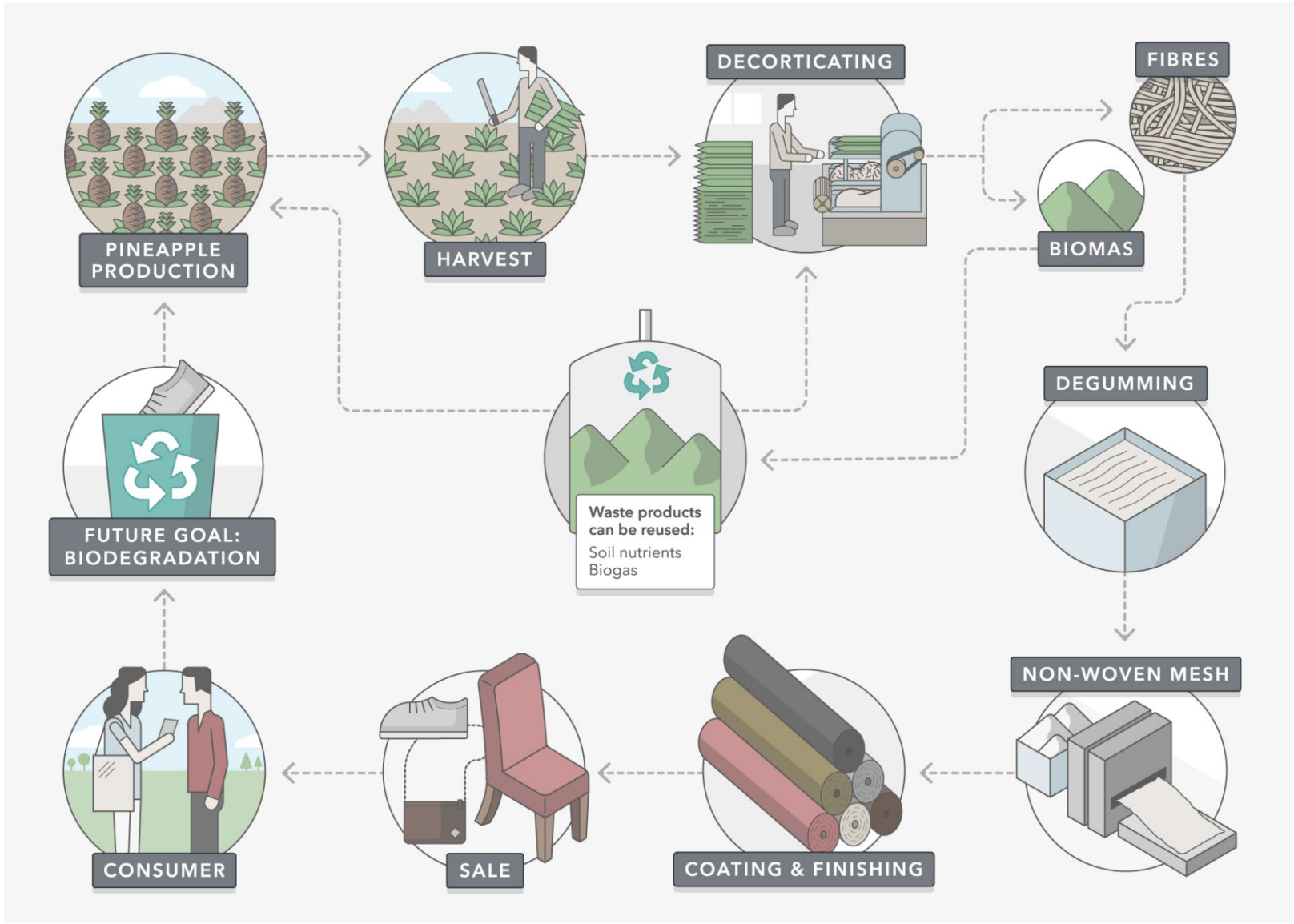
UNECE

A Leather Value Chain – *Wild Animals*



UNECE

A Leather Value Chain – *Vegan Alternatives*



UNECE

A Leather Value Chain – *Conventional Leather*

Criticalities

- **Tanneries** in Europe are normally **family-owned,** SMEs with strong regional concentration[1]
- Although **pollution prevention** and **cleaner production** techniques can result in financial benefits in the long term, tanneries face financial difficulties

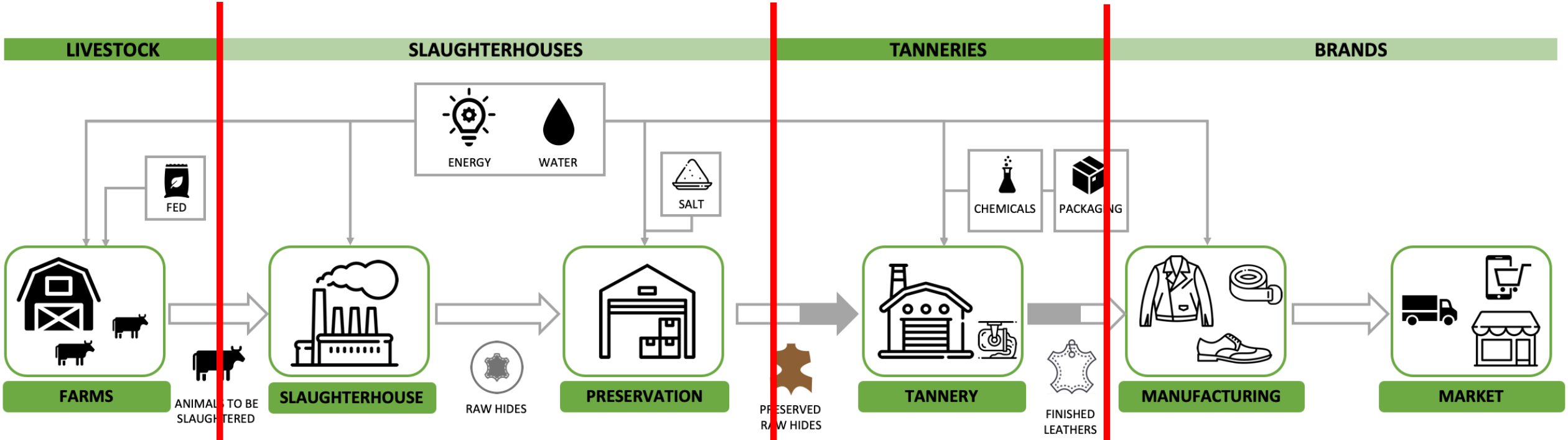
Risks

- Fashion is a very secretive business[1] and has quite complex, dispersed and **fragmented** supply chains[2]
- Fashion supply chains are **characterized** by power imbalance, downward price pressure, lack of supply chain integration and trust issues
- The leather industry is heavily dependent upon the **meat industry**
- Lack of **traceability** of hides and skins!
- Heavy use of **chemicals**

1. *European Commission (2019) The leather industry in the EU, Internal Market, Industry, Entrepreneurship and SMEs*
2. *Newbold, A. (2018) Why we need to talk about transparency in fashion, Vogue*
3. *BOF and McKinsey (2019) The State of Fashion 2019*

UNECE

A Leather Value Chain – *Critical Issues*



Animal welfare
Deforestation
Traceability

Health and safety
Salt use
Effluent control

Health and safety
Salt removal
Water consumption
Water pollution
Waste management
Restricted substances

Traceability
Compliance
Supply chain safety
Restricted substances
External communication

UNECE

A Leather Value Chain – *Regulations*

There is no specific EU legislation for the leather industry. The leather sector has different measures in terms of the environment, the use of chemicals, the use of certain dangerous substances and the use of animal by-products[1]

Regulations

- **Regulation (EC) No 1907/2006** on the Registration, Evaluation, Authorisation and restriction of Chemical substances (**REACH**)

- **CITES** (the Convention on International Trade in Endangered Species of Wild Fauna and Flora)
- **Directive 2010/75/EU** on industrial emissions

- **Regulation (EC) 1069/2009** and **Commission Regulation (EU) 142/2011** on animal by-products and derived products not intended for human consumption

1. European Commission (2019) The leather industry in the EU, Internal Market, Industry, Entrepreneurship and SMEs

UNECE

A Leather Value Chain – *Measures*

LIVESTOCK	SLAUGHTERHOUSES	TANNERIES	BRANDS

CERTIFIED WILDLIFE FRIENDLY

BSCI Business Social Compliance Initiative

EU Ecolabel www.ecolabel.eu

LEATHER WORKING GROUP

Fashion for Climate Action Charter — WE JOINED

CERTIFIED HUMANE RAISED & HANDLED

RSPCA ASSURED

label Rouge

INTEGRATED MANAGEMENT SYSTEM
ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

Tannery of the Future
Sustainability self-assessment

Sustainable Apparel Coalition

FASHION PACT
G7 FRANCE BIARRITZ 2019

Beter Leven ★★★

TextileExchange Responsible Leather Round Table

ISO International Organization for Standardization
ISO 45001:2018

Ø ZDHC Zero Discharge of Hazardous Chemicals

THE FIVE FREEDOMS
1 GOOD LIFESTYLE — Freedom to express normal patterns of behaviour, sufficient space, suitable facilities and the company of its fellow sheep
2 GOOD NUTRITION — Freedom from hunger, thirst and malnutrition
3 GOOD ENVIRONMENT — Freedom from discomfort through shelter and provision of a comfortable environment
4 GOOD HANDLING — Freedom from fear, through good care and handling
5 GOOD HEALTH — Freedom from pain, injury and disease

O'RA Online Interactive Risk Assessment

global animal PARTNERSHIP

ETHICALLY CORRECT CERTIFIED COMPANY SA 8000

Higg Index — Higg Product Tools, Higg Facility Tools, Higg Brand & Retail Tool

ANIMAL WELFARE APPROVED BY AGW

UNECE

Status Quo – *Some Encouraging Practices for Traceability*

- *Industrial symbiosis in regional tanning districts – India, Italy*
- *Robust animal welfare standards and open source methodologies – Kering*
- *Process innovation to ensure traceability through licensed salt-free hides – Litehide*
- *Credit trading system – Textile Exchange Responsible Leather Roundtable*
- *DNA marking (molecular tagging for leather) – Stahl*

Science, collaboration and capabilities (technical, relational and financial) are needed to ensure transparency and traceability across leather value chains

UNECE

Hands-on Workshop

Think Tank

Agenda

- Instructions & Group compositions

  Roundtable 1 (1 hour) - 40 min discussion + 20 min reporting in plenary

- *Break & Networking (15.30 – 16.00)*

  Roundtable 2 (1 hour) - 40 min discussion + 20 min reporting in plenary

- *Conclusion & Remarks & The Way Forward (17.00)*

UNECE

Think Tank

The Structure

Textile

- *Group 1 working on Natural plant based fibers (cotton, linen)*
- *Group 2 working on Synthetic fibers*
- *Groups 3 working on Man-made cellulosic and bio-synthetic fibers, and Natural animal based fibers (wool)*

Leather

- *Groups 4 working on exotic, livestock animal based and innovative leather*

Roundtable: Who does what?

Q1. *Which are the key fibers within each sub-group of identified fibers to be covered under the project?*

Q1. *What are the key sustainability hotspots, KPIs and relevant standards and certificates?*

UNECE

Dr. Hakan Karaosman
hakankaraosmann@gmail.com

Thank you!