



Measuring the
Environmental Impact
of Leather



Objectives

The report on the Leather Working Group (LWG) Life Cycle Assessment (LCA) study offers a comprehensive evaluation of the environmental impact of leather production across fifty diverse products within six product families. It includes chrome-tanned and glutaraldehyde-tanned leathers used in footwear, furniture, leather goods, and automotive upholstery, covering the entire production process from raw material sourcing to finished leather manufacturing, with data collected globally.

The report's primary objective is to provide accurate and updated insights into the environmental impact of leather production, supporting stakeholders in reducing environmental footprints and making informed decisions. The analysis focuses on one square meter (1m²) of finished leather, with additional metrics provided per kilogram. It assesses impact categories such as Global Warming Potential, Eutrophication, Abiotic Depletion, Water Use, Freshwater Ecotoxicity, and Water Consumption.

The report aims to equip LWG stakeholders with robust data for strategic decision-making in the leather industry.



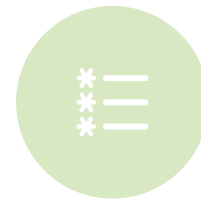


Summary

The work has revealed that raw material sourcing and upstream processes are the primary drivers of the environmental impact of leather production, particularly in terms of Global Warming Potential (GWP). These upstream activities are integral to leather's status as a by-product of the meat industry and underscore the importance of allocation debates in environmental assessments.

However, attributing the environmental burden solely to upstream processes would be incomplete. Core leather production processes also contribute significantly to the environmental impact, highlighting the need for improvements across all stages of production. The LWG LCA identifies these areas as crucial for achieving meaningful environmental gains.

The report identifies actionable measures to improve the environmental credentials of leather production, advocating for a holistic approach to mitigate adverse impacts. It is anticipated that LWG-certified leather manufacturers will leverage this data to reduce their environmental footprint, while brands and retailers can make informed sourcing decisions to advance their sustainability objectives.



The report, covering eight impact categories, identifies raw materials and upstream processes as the primary contributors to most environmental impacts, including GWP, eutrophication potential, water use, and water consumption. Specifically, upstream impacts from farming and slaughtering account for 68% of the total GWP, with farming being the dominant contributor.

Within core manufacturing processes, the post-tanning stage emerges as the most impactful, particularly concerning abiotic depletion, and freshwater ecotoxicity. Chemicals are identified as the most significant environmental aspect in these areas, surpassing raw materials.

In conclusion, while upstream processes are significant contributors to the environmental impact of leather production, core manufacturing processes also play a critical role. To achieve meaningful environmental improvements, a comprehensive approach addressing all stages of production is essential.



Impacts from farming and slaughtering account for 68% of the total GWP



Global warming potential associated with 1m² of finished leather

Impact

Product Families



Impact Categories

1. Global Warming Potential
2. Eutrophication
3. Abiotic Depletion
4. Water Use
5. Freshwater Ecotoxicity
6. Water Consumption

Core Impact Centres

- Upstream**
- Cattle Rearing and Slaughter
- Core**
- Beamhouse
 - Tanning
 - Post Tanning
 - Finishing
 - General

Environmental Aspects Assessed Within Study

1. Raw Materials
2. Water Consumption
3. Thermal Energy
4. Electric Energy
5. Chemicals
6. Transport
7. Solid Waste
8. Wastewater

Geographical Distribution

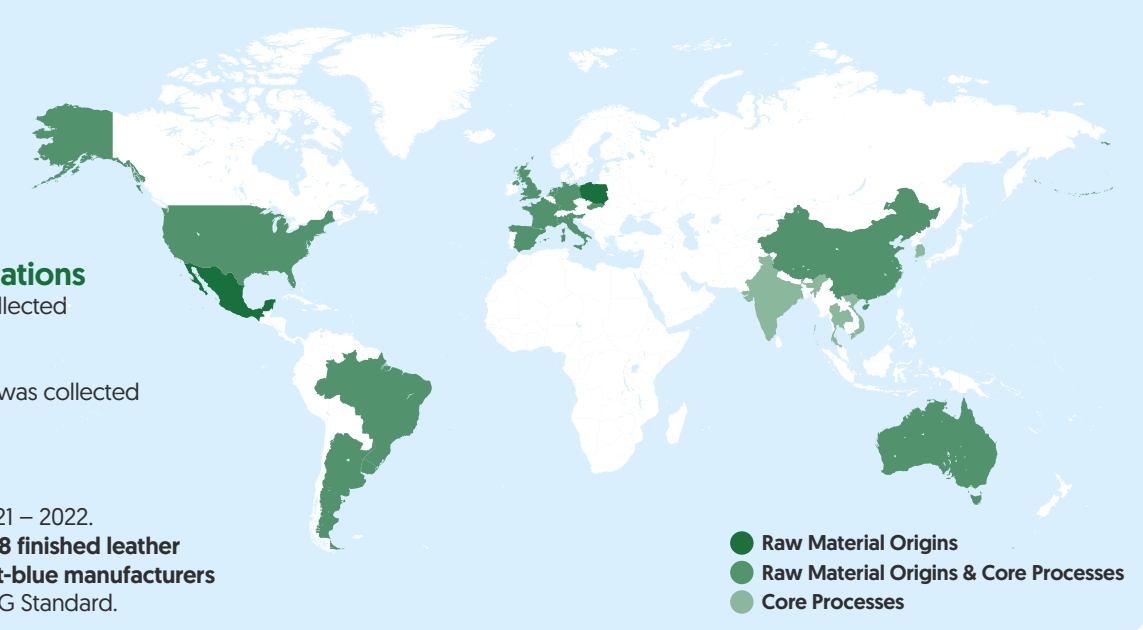
Data Collection Locations

Raw material data was collected from 16 countries.

Core manufacturing data was collected from 18 countries.

Data Collection

Data Collection Period: 2021 – 2022.
Data was collected from 28 finished leather manufacturers and 32 wet-blue manufacturers all certified against the LWG Standard.





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This summary is taken from the study of the Life Cycle Analysis [LCA] of leather production that was commissioned by Leather Working Group for all the stakeholders of the organisation. The collection and analysis of the data, and presentation of the work, was carried out by the consultancy, Spin360.

The full study is available to leather Working Group Stakeholders.