

Introduction of the Product Environmental Footprint (PEF) methodology in Georgia

Pilot Project: Royal Brand



Life cycle thinking according to PEF

The Product Environmental Footprint (PEF) methodology is designed to assist companies **measure the environmental performance of their products** and position **themselves in the market of sustainable products**. The PEF method entails a multi-criteria measurement of the environmental performance of a good or service throughout its life cycle. It **considers the entire resource cycle** and environmental factors in product manufacturing across all stages and **provides concrete rules** that reduce freedom of interpretation and promote stringent data quality and verification requirements. Implementation of a PEF assessment establishes 16 environmental impact categories and includes representative product profiles, which serve as benchmarks within their product categories.

Royal Brand

Sector | Apparel and Footwear

Location | Telavi, Georgia

Key products | Women's and orthopedic shoes

Employees | 2 Women and 1 Man

Main markets | Georgia

Exportation quota | 0%

Founding year | 2022

Certifications/management systems | None



Beyond its distinctive products, the atelier is committed to excellence and innovation, demonstrated through its successful engagements with several grant projects dedicated to empowering women entrepreneurs. The financial support from these grants facilitated the acquisition of vital machinery, enhancing production capabilities.



Motivation for introducing the PEF methodology

Process optimization | Specific recommendations based on the LCA results would typically involve suggestions for sourcing sustainable materials, optimizing manufacturing processes, and considering end-of-life recyclability. These recommendations will be crucial for the company to further improve recourse optimization, such as energy efficiency and sustainable packaging solutions.

Sustainability commitment | Understanding the environmental impact of products across their entire life cycle will allow the company to gain crucial insights into what's contributing the most to company environmental footprint. Exploring opportunities for improving sustainability and reducing environmental impact.

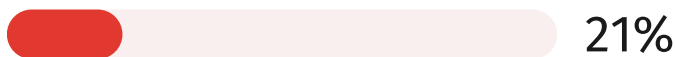
Action implemented by:

Key findings of the PEF study

The **most relevant impact categories** are (1) Climatic change (21%), (2) Particular matter (13%), (3) Ecotoxicity, and Freshwater (12%), (4) Acidification (10%), and (5) Resource use, fossils (10%). The **most relevant life cycle stages** for this product are (1) LCS1 Raw materials acquisition and pre-processing and (2) LCS2 Manufacturing. Finally, the **most relevant processes** for this product are (1) Leather tanning and processing, and (2) Residual grid mix.



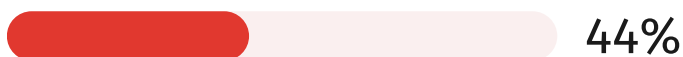
Climate change impact category:



LCS1: Raw materials acquisition and pre-processing



Process: Caprine leather wet-white metal free tanned



Recommendations

Technology Upgrades | Energy efficiency measures to lower energy consumption during manufacturing should be undertaken.

Raw Material Sourcing | With the Raw materials acquisition and pre-processing life cycle stage having the most impact, collaboration with eco-friendly companies for sustainable material sourcing is crucial to reduce the environmental associated with raw material sourcing.

Waste Reduction | Implementation of waste reduction strategies, for instance, design recyclability of the product.

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Ecology is of paramount importance to our company and we believe our participation in PEF piloting will contribute positively to overall Georgian ecological impact. People are facing numerous environmental challenges, and my company is compelled to contribute in any way possible. Our company is dedicated to creating a positive environmental impact.

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Nino Mrelashvili, CEO

The Product Environmental Footprint (PEF) methodology was introduced by the European Commission in 2013, under the 2013 Single Market for Green Products (SMGP) initiative. In the Eastern Partner (EaP) region, the PEF methodology is promoted as an activity led by the United Nations Industrial Development Organization (UNIDO), through the EU-funded EU4Environment Action. For more details, visit: www.eu4environment.org

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