



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

Pilot Project: ALFA HT



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.

ALFA HT

Sector | Hosiery products (socks)
Location | Machukhy, Poltava region, Ukraine
Key products | Socks
Employees | 74
Main markets | Ukraine
Exportation quota | 0%
Founding year | 2014
Certifications/management systems | ISO 9000



The company is represented in Poland, the Czech Republic, Slovakia, and Switzerland, and has further ambitious expansion plans. In 2023, the company received a Certificate of Recognition from the Ministry of Ecology for sustainable business practices, EU4Business "Business Recognition Awards - 2023" winner.

Motivation for introducing the PEF methodology

Process optimization | The PEF study allows to define of the most relevant processes with the biggest environmental impact which could be considered by the company as areas for improvement intervention. That intervention could be taken into account within the future financing planning of the company.

Competitiveness in the EU market | The company is committed to enhancing product sustainability to effectively enter the EU market.

Sustainable business model implementation | Conducting a PEF study will allow running economic activities in an eco-friendly manner in short- and long-term perspectives based on improvements.

Action implemented by:



Key findings of the PEF study

The **most relevant impact categories** for the product are (1) Water use (48.4%), (2) Climate change (16.7%), (3) Particulate matter (8.87%), and (4) Resource use (8.24%). The **most relevant life cycle stages** for this product are (1) LCS1 Raw materials acquisition and pre-processing (79.6%) and (2) LCS2 Production (18.5%). The **most relevant processes** for this product are (1) Electricity grid mix 1kV-60kV (36.7%), Cotton fiber (35.8%), Cargo plane (10.9%)



Climate change impact category:

43%

Raw materials acquisition and pre-processing

53.1%

Production

Water use impact category:

99.7%

Raw materials acquisition and pre-processing

Water use impact category:

76%

Raw materials acquisition and pre-processing

Recommendations

Sustainable raw material sourcing | Water use (48.4%) is identified as the most important impact category. This is related to cotton harvesting and production technologies. Therefore, it is advisable to seek textile companies that use more eco-friendly and sustainable cotton harvesting practices. Improvements related to the socks production require changes or related processes of raw materials production which could be done within the separate PEF study for the main cotton producers. The company has a limited scope of intervention within some processes.

Energy efficiency | The second impact process is an electricity grid mix during the production stage. Impact reduction could be achieved by using alternative energy sources i.e. solar panels.

Logistics improvement | The biggest impact related to the logistics of cotton. Exploring ways in which logistics will not require cargo plane transportation will contribute to CO2 emissions reductions.



“Participation in the PEF study allowed us to see points for potential sustainable business implementation. By sharing our experience we have an intention to show the importance of PEF methodology for other companies in Ukraine and the necessity of a databased approach”.



Tetiana Yahodiak, Director LLC “ALFA HT”

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

© – 2024 – UNIDO. All rights reserved. Licensed to the European Union under conditions.

This publication has been produced with the assistance of the European Union. Its contents are the sole responsibility of UNIDO and do not necessarily reflect the views of the European Union.



United Nations Industrial Development Organization
Ms. Tatiana Chernyavskaya
EU4Environment Project Manager
Tel: +43 1 26 0 26 5520
E-mail: t.chernyavskaya@unido.org



Resource Efficient and Cleaner Production Centre 10G
Starokyivska Str.
Kyiv, 04116, Ukraine
Tel: +380 44 227 83 78
E-mail: info@recpc.org