



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

Pilot Project: Children's Apron Kitchen Line



## Introduction to 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.

## Children's Apron Kitchen Line

**Sector** | Apparel and footwear

**Location** | Tbilisi, Georgia

**Key products** | Clothes, bed linen, aprons for children

**Employees** | 5 women

**Main markets** | Georgia (Tbilisi and Batumi)

**Exportation quota** | 0%

**Founding year** | 2016

**Certifications/management systems** | None



PEA Tbilisi aims to use natural materials in production. It is strongly oriented towards EU export and therefore is interested in consulting assistance to have more sustainable and environmentally friendly products that will support it in export endeavors.

## Motivation for introducing the PEF methodology

**Improvement potential** | PEA is already utilising a substantial amount of natural products in production and is constantly searching for additional ways to implement environmentally-friendly practices. Hence introduction of the PEF methodology will help the company advance in this regard.

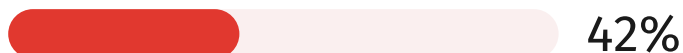
**Compliance with EU regulations** | The founder and Head of PEA previously worked at the Ministry of Economy's environmental department, hence she is well aware of the notion of the product's environmental footprint. She aspires to expand PEA's market to Europe and therefore aims to ensure compliance with the EU regulations by applying PEF methodology.

## Key findings of the PEF study

The **most relevant impact categories** are (1) Water use (42%), (2) Climate change (15%), (3) Resource use, fossil (9%), (4) Particular matter (8%), and (5) Resource use, minerals and metals (7%). The **most relevant life cycle stages** for this product are (1) LCS1 Raw materials acquisition and pre-processing and (2) LCS4 Use phase. Finally, the **most relevant processes** for this product are (1) Cotton fiber, (2) Washing, 40°C, and (3) Tumble drying.



Water use impact category:



LCS1: Raw materials acquisition and pre-processing



Process: Cotton fiber



## Recommendations

**Process Optimization** | The data indicates that the company can improve its environmental footprint by decreasing CO<sub>2</sub> emission through the use phase (67.7%), e.g. transition to renewable energy during washing and ironing. Although the distribution's contribution is comparably low, 0.829 %, it can be plausible for the company to transit to use zero-emission transport for distribution.

**Raw Material Sourcing** | As *Raw materials acquisition and pre-processing* lifecycle stage is the most relevant for the company, collaboration with eco-friendly textile companies for sustainable material sourcing is crucial for improving the product's environmental footprint.

**Energy Efficiency Measures** | Transition to renewable energy practices during ironing and washing at the use stage.

“ I'm convinced that applying the PEF methodology will help PEA with expanding its market to the EU. As of now, all materials used in the Children's Apron Kitchen Line's production are already natural and of high quality, so we are encouraged to support it with the outcomes of the PEF study. As a next step, aim to translate the PEF data into certain environmental certificate of target export jurisdiction. ”

Ketevan Zivzivadze, 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](http://www.eu4environment.org)

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