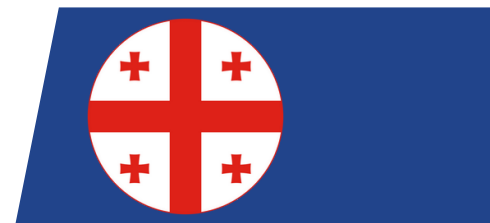




Introduction of the Product Environmental Footprint (PEF) methodology in Georgia

Pilot Project: Santa LLC



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.

Santa LLC

Sector | Dairy products

Location | Tsalka municipality, Georgia

Key products | Varieties of cheese: Imeretian, “factory cheese”, Sulguni, Nadughi, ham-type cheese, and Gouda

Employees | 24 Woman and 36 Man

Main markets | Georgia

Exportation quota | 0%

Founding year | 1997

Certifications/management systems | None



The company is well-known for its high-quality cheese production using a blend of Georgian and Dutch cheese-making technologies, a testament to the company's dedication to combining traditional and modern techniques. The milk used in their cheese production is sourced from local Dutch-breed cattle, ensuring a consistent supply of high-quality raw material.

Motivation for introducing the PEF methodology

Internal decision-making | By understanding the environmental impacts of the cheese production processes, the company aims to identify improvement opportunities, optimize resource usage, enhance the overall sustainability of the company's operations, and therefore improve internal decision-making processes.

Benchmarking and industry comparison | The study's outcomes are aimed to be utilized for benchmarking purposes, comparing environmental performance with industry averages and best practices. This comparison will provide insights into areas of strength and highlight improvement opportunities.

Continuous improvement | The study is a foundation for ongoing efforts toward continuous improvement which will help stay at the forefront of sustainable cheese production practices.

Key findings of the PEF study

The **most relevant impact categories** are (1) Climate change, (2) Acidification, (3) Eutrophication, terrestrial, (4) Land Use, (5) Ecotoxicity, and Freshwater change, (2) Acidification, (3) Eutrophication, terrestrial, (4) Land Use, (5) Ecotoxicity, and Freshwater. The **most relevant life cycle stages** for this product are (1) Raw milk supply and (2) Dairy processing. Finally, the **most relevant processes** for this product are (1) Energy consumption and (2) Brine solution (terrestrial acidification).



Climate change impact category:

145kg CO2-eq

Raw milk supply

585g CO2-eq

Dairy processing

Resource use, fossils impact category:

6725 MJ

Raw milk supply

40.9 MJ

Dairy processing

Recommendations

Process optimization | The company has already identified opportunities to install solar panels to decrease its dependence on electricity. Further improvements could include improved energy efficiency, waste management, and water usage in specific stages of cheese production.

Technology upgrades | Consider the adoption of cleaner technologies to further minimize environmental impacts. For instance, tractors for haymaking can potentially be replaced with more eco-friendly transport.

Raw material sourcing | Even though the raw materials are mostly sourced locally, some products such as salt are imported. The company has expressed its commitment to importing salt from neighboring countries.

Emission reduction strategies | Develop strategies to reduce greenhouse gas emissions, air pollutants, and other specific environmental burdens associated with cheese production.

Waste Reduction | Apart from existing wastewater treatment additional options to improve waste management for the manure produced in the facility can be explored.

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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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Darejan Kanteladze, 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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