



Life-RENDER - Promoting the implementation of Product Environmental Footprint Methodology in the European Dairy Sector.

LIFE16 ENV/ES/000173



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Project description:

Background

The food and drink industry is a major contributor to the overall pollution load in Europe. The sector is a major energy user (10-15% of total energy in industrialised countries) and a major user of water (8% of all water used by the industrial sector). A 2006 UK government report on “Environmental Impacts of Food Production and Consumption” indicated that dairy products have the second highest environmental impacts in the sector, with milk, cheese and butter contributing up to 4% of the global warming potential of consumption, and up to 13% to eutrophication.

Within the dairy industry supply chain, dairy farming produces the most greenhouse gas emissions. However, according to a recent United Nations Food and Agriculture Organisation study, up to 55% of the total environmental impacts of dairy products come from the processing stage. The main challenges that dairy processing plants face are water consumption, effluent discharge, energy consumption and emissions.

Meanwhile, consumers and stakeholders are putting an increased focus on the environment. In this regard, the European Commission developed the Product Environmental Footprint (PEF) as a single metric to assess and benchmark the environmental performance of products. To make PEF studies more consistent, technical guidance for specific product categories, or Product Environmental Footprint Category Rules (PEFCRs) have been developed. However, application of

the PEF methodology is often too complex for small and medium-sized enterprises (SMEs). The European Commission has identified some key actions to tackle this: provide tools to support SMEs and make sure that PEFCRs represent a simplification of the application of PEF.

Objectives

Life-RENDER will develop and demonstrate an innovative decision-support tool that will help SMEs in the food and drink sector to carry out PEFCR-compliant studies and to identify focused environmental measures. The project will promote the implementation of the PEF methodology at European level as a key tool to assess life-cycle environmental performance of products, and to communicate them to business consumers and stakeholders. The tool will be usable by non-experts through simplified data collection and analysis processes.

The project's specific objectives are to:

- Demonstrate an easy-to-use and easy-to-understand software tool for dairy sector SMEs to carry out PEFCR-compliant studies as a basis for reducing environmental impacts, in particular by minimising energy and water consumption, minimising waste and optimising the use of raw materials. This tool will be the first of its kind for the dairy sector;
- Demonstrate the tool by assessing the environmental footprints of 30 dairy products in France and by implementing measures identified by the software application to reduce the environmental footprint of six dairy products;
- Demonstrate the transferability to other Member States of the tools through replication tests in dairy companies in Spain and Portugal;
- Improve the competitiveness of the EU dairy sector by reducing production costs and improving environmental performance; and
- Implement awareness-raising strategies aimed at consumers and stakeholders to increase their familiarity and understanding of PEF.

The project has the potential to contribute to the implementation of a number of EU directives, including the Industrial Emissions Directive, the National Emission Ceilings Directive, the Packaging and Packaging Waste Directive, the Waste Framework Directive, and the Urban Waste Water Directive. The EU Circular Economy Action Plan also identifies food waste and plastic waste (packaging) as priority areas.

Expected results:

- Production of an interactive online tool that will integrate the PEF and Dairy PEFCR methodologies and enable the identification of focused Best Available Techniques, Technologies and Management Practices to lower the environmental footprint of dairy products;
- At least two representatives of each participating dairy company to be trained in the PEF methodology;
- Analysis of the environmental footprint of at least 30 common dairy products produce by French dairy SMEs;
- Identification of eight environmental measures via the software application;
- Implementation of these measures to reduce the environmental footprint of six dairy products;

- Organisation of technical showcases in Portugal and Spain; and
- Further PEF studies for at least 10 dairy products;
- 10% reduction in water consumption and wastewater generation by participating dairy SMEs;
- 15% reduction in energy consumption by participating dairy SMEs;
- 5% reduction in waste generated by participating dairy SMEs;
- Prevention of 84 tonnes/year of CO2 emissions by participating dairy SMEs during the course of the project; and
- A 10% reduction in the manufacturing cost per tonne of dairy products.

Results

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Environmental issues addressed:

Themes

Environmental management - Environmental accounting
Industry-Production - Food and Beverages

Keywords

decision making support, food production, environmental assessment

Target EU Legislation

- Water
- Directive 2000/60 - Framework for Community action in the field of water policy (23.10.2000)
- Waste
- COM(2015)614 - "Closing the loop - An EU action plan for the Circular Economy" (02.12.2015)
- Industry and Product Policy
- Directive 2010/75 - Industrial emissions (integrated pollution prevention and control) (24.11.2010 ...)
- Climate Change & Energy efficiency
- Directive 2012/27 - Energy efficiency (25.10.2012)

Natura 2000 sites

Not applicable

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Beneficiaries:

Coordinator	Inkoa Sistemas, S.L.
Type of organisation	SME Small and medium sized enterprise
Description	Inkoa is an engineering company that specialises in the agri-food and environmental sectors. Inkoa's aim is to promote sustainable development through the implementation of new technologies and methodologies at international level in these sectors.
Partners	ACTALIA ASSOCIATION, France DELOITTE(BIO INTELLIGENCE SERVICE), France Association Nationale des Industries Alimentaires, France Federação das Industrias Portuguesas Agro-Alimentares, Portugal FEDERACIÓN ESPAÑOLA DE INDUSTRIAS DE ALIMENTACIÓN Y BEBIDAS, Spain COOPERATIVE LAITIERE DE LA SEVRE, France

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Administrative data:

Project reference	LIFE16 ENV/ES/000173
Duration	04-SEP-2017 to 30-NOV -2020
Total budget	1,717,552.00 €
EU contribution	924,163.00 €
Project location	País Vasco(España)

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